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ABSTRACT

This compilation of presentations given at the National Conference on Performance Based Teacher Education (PBTE) centers around two main themes: the present state of the scene in performance-based vocational teacher education, and changes in the educational setting in both schools and colleges that will affect PBTE in the near future. Among the twelve presentations included are (1) An Analysis of the Performance-Based Education Movement, by Robert Houston; (2) Working Model of Performance-Based Vocational Teacher Education, by Glen Fardig; (3) Teacher Assessment in the University of Central Florida Performance-Based Vocational Teacher Education Program, by Steven Sorg; (4) The Impact of Performance-Based Vocational Teacher Education, by Key Adams; (5) Development of Performance-Based Teacher Education Modules for Nondiscriminatory Instruction, by James Hamilton and Lois Harrington; and (6) Development of Professional Materials for the Preparation of Local Administrators of Vocational Education, by Robert Norton. The conference agenda is appended. (LRA)

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PROSPECTS OF
PERFORMANCE-BASED VOCATIONAL TEACHER EDUCATION

Proceedings of the
National Invitational Conference on
Performance-Based Teacher Education

Orlando, Florida
March 20-21, 1980

Edited by
Glen E. Fardig

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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May 1980

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KAREN M. QUINN

who was so much a part
of the development of PBTE

FOREWORD

The year 1980 seems a propitious time to pause and take stock of performance-based vocational teacher education. The principles of PBTE are now generally understood and widely accepted (though less widely applied), individualized instructional modules have been available long enough to have been thoroughly put to the test and found successful, and new PBTE programs have emerged in many areas of the country. Besides, all of us who are working in this most exciting education innovation need, from time to time, a chance to have our energies renewed, our plans and intentions reinforced, and our reservoir of information refilled. The National Invitational Conference on Performance-Based Teacher Education provided an opportunity to do all these things.

This document is a compilation of the major presentations, prepared for printed form, that were given at the National Conference. A number of mini-presentations were also a featured activity, but unfortunately, space does not permit their inclusion here. Most Conference sessions were held on the campus of the University of Central Florida, with some seventy vocational teacher education leaders attending. Twenty-two states and one Canadian province were represented. All of those at the Conference were directly involved with the development or implementation of PBTE in some way.

The National Invitational Conference on PBTE developed around two main themes: the present state of the scene in performance-based vocational teacher education, and changes in the educational setting in both schools and colleges that will affect PBTE in the near future. The first theme is dealt with in several presentations describing views, or prospects, of PBTE from a number of personal vantage points in the educational landscape. Robert Houston looks at teacher education from the national perspective and finds that PBTE has come a long way, but sees some rough patches still to be crossed. In a series of descriptive presentations, Fardig, Paugh, Sorg, Park, and Hall report on an operational PBTE program that has attempted to exemplify all the principles and practices that give this approach such great potential for improving teacher education. Kay Adams' study shows that PBTE has proved to be an educationally sound and successful R & D innovation.

But what are the future prospects of PBTE? Will this approach continue to grow in strength and expand in application? What must be done in vocational teacher education to meet the challenges that lie ahead? Projects at the National Center for Research in Vocational Education give some response to these questions. Hamilton and Harrington describe the research studies being used as the basis for developing modules to prepare vocational teachers for working with students with special needs, while Norton reports on performance-based materials that are being developed to train vocational administrators. From the point of view of schools and colleges, competency-based vocational instruction and teacher

education centers are both very likely to potent forces in the future; Heitzman and Toothman deal with these respectively. Pollard contends that PBTE may make some of its greatest contributions in the area of staff development in community colleges.

Discussion at the National Invitational Conference made clear that the problems of implementing PBTE are of continuing concern to teacher educators. There is also a firm and growing conviction that dispite the difficulties involved, and the fact that there is need for more research and development, performance-based teacher education is surely the direction that preservice and inservice vocational teacher education must take.

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AN ANALYSIS OF THE PERFORMANCE-BASED EDUCATION MOVEMENT

W. Robert Houston

College of Education
University of Houston
Houston, Texas

An Analysis of the Performance-Based Education Movement

Introduction

When future generations look back at American education during the 1970's, they likely will mark it as the age of Performance-Based Education (PBE) or Competency-Based Education (CBE). Initiated in teacher education at the close of the previous decade, PBE/CBE captured the imagination of both educators and laymen throughout the world. The approach has been used to educate dentists and physicians, nurses, engineers, attorneys, teachers, and school administrators. It has been used to train karate experts and restaurant managers. It has been used to assume minimum standards for high school graduation and as a basis for teacher certification. In all this activity, PBE/CBE has become political as well as educational.

The motivation for turning to competency-based education can be traced to two basic needs. Understanding them and their implications for educators, and distinguishing between them, may help to clarify current events, for their roots are different, their potential different, and their philosophical bases different.

The Minimum Competency Movement

The first need is to protect traditional symbols of achievement. Alarmed by falling test scores and reports that thousands of barely literate students are graduating from high school, state legislatures are turning to "competency-based Education" as an approach to shoring up the high school diploma.

For many states, this implies tests of reading, mathematics, and English language usage. For a number of educators, this is extended to include evidence that "graduating students can apply the basic skills in everyday situations--writing a business letter, making a wise consumer purchase, deciphering a bus schedule, and so on" (Slater and Nafziger, 1978).

This minimum competency movement clearly is being pushed by non-educators and implemented through state legislatures and state boards of education. First introduced in 1975, by 1978, "33 states had taken some type of action to mandate the setting of minimum competency standards for elementary and secondary students. All the remaining states either have legislation pending or legislative or state board studies under way" (Pipho, 1978). Since this was written the move toward formalized minimum competency tests has slowed, but according to a personal communication in March 1980, from Chris Pipho, the movement's unofficial scorekeeper, 38 states have instituted some sort of action. Some of these mandate state standards (e.g., Florida, Louisiana, Maryland), while others leave the specific competency decisions to local schools (e.g., Oregon,

Colorado). Several states (e.g., Maine, Kansas and Illinois) requested a pilot test of the system with a report back to the legislature (Pipho, 1980).

There is some evidence that such measures are making a difference. In October 1978, a significantly greater number of Florida eleventh- and twelfth-graders passed communications and mathematics tests than one year earlier. "The results support the belief that Florida was right in implementing a statewide system of performance standards and student tests keyed to those standards...The first testing revealed our problem areas; the results of the second testing show we are on the right track" (Turlington, 1979).

Parallel to the competency requirements for high school graduation is the minimum competency testing movement for teacher certification. In addition to completing college preparation program requirements, prospective teachers must pass a competency test to qualify for their initial teaching certificate. The National Teacher Examination is used for this purpose in Louisiana, Mississippi, North Carolina, South Carolina, and West Virginia. Arkansas and, after July 1, 1980, Virginia, require competency testing but leave the specific instrument to be designated by the state board of education. The Florida State Department of Education is developing both general and specialized examinations that are scheduled to be ready by July 1, 1980. Georgia requires that prospective teachers pass a criterion-referenced test of knowledge in the teaching field for which certification is sought. A number of other states, including Arizona, Colorado, Kansas, Missouri, New York, Texas, and Vermont either have the legislation introduced or are exploring actively the possibility of minimum scores on competency tests as a prerequisite to certification.

Such minimum competency tests are not a recent development. The professions of medicine, law, dentistry, engineering, and accounting have employed them for years as the basis for licensure. The public approves of such a practice for teachers. In the 1979 Gallup Poll of the Public's Attitudes Toward the Public Schools, 85 percent of those polled believed that teachers should be required to pass a state exam in their subject areas and that they should be continually retested (Gallup, 1979).

The first basis for competency-based education for high school graduates or prospective teachers is the protection of traditional symbols of achievement. In part, this represents a lack of confidence by the public in its institutions to provide quality education and to exercise quality control.

Performance-Based Teacher Education

The second basis for competenty-based education, and clearly a different definition of the concept, is predicated upon valid performance patterns and adult learning theory. Referred to as performance-based teacher education (PBTE) or competency-based teacher education (CBTE),

the movement was formulated and shaped in the late 1960's and early 1970's. Its major theses were that (1) performance of professionals and the consequence of that performance were of greater importance than simply knowing about a discipline or knowing about teaching; (2) objectives of the program were based on knowledges and skills employed by effective practitioners; (3) instruction in professional preparation was designed to facilitate demonstration of competencies; and (4) evaluation was based on objectives while learner progress was predicated on demonstrated competence. The purpose of this second use of the term (actually the first, chronologically), is instructional rather than protection even though the goal of both is improved performance. PBTE was so visible until the last three or four years that one might wonder if, today, it is a movement whose time has passed. Evidence would suggest that this is not the case. Marshall McLuhan's admonition that one's basic environment is all but invisible to those involved was punctuated with the query: "Who invented water? It wasn't a fish." The basic principles of PBTE, with two notable exceptions, are such a part of most teacher education programs as to be virtually invisible to those involved (e.g., behavioral objectives, teaching-skill training, work in schools, modules).

Three national surveys have been conducted to determine the extensiveness of PBTE implementation, in 1973 by Allen Schmieder, in 1975 and in 1977 by Sandefur and Westbrook, with a 1980 survey by Sandefur being conducted at this time. These are summarized in the following table:

Involvement	1973[a] (n=783)		1975[b] (n=570)		1977[c] (n=686)	
	n	%	n	%*	n	%*
1. Operating full-scale CBTE program	10	1	47	8	63	9
2. Operating limited CBTE program	115	15	249	44	335	49
3. Exploring or developing CBTE program	424	54	269	47	178	26
4. Not involved	228	29	98	17	199	29

*Does not sum to 100 percent because of duplications between groups 2 and 3.

a. Schmieder (1973) study based on 783 of 1200 institutions (65% response)
b. Westbrook and Sandefur (1975) study based on 570 of 865 AACTE institutions (66% response)
c. Sandefur and Westbrook (1978) study based on 686 of 816 AACTE institutions contacted (84% response)

Trends in implementation may be summarized as follows: (1) the number and percent of teacher education institutions operating full-scale programs increased with each survey (from 10 to 63 institutions and 1 to 9 percent); (2) the number and percent of institutions operating limited PBTE programs increased with each survey; (3) the percent of institutions exploring CBTE decreased with each survey (54% to 47% to 26%).

In 1977, Sandefur and Westbrook (1978) asked the 398 institutions about their future plans. Fifty-one (51) percent planned to continue with present programs, 31 percent planned to increase their PBTE programs, and only 6 percent planned to decrease PBTE programs.

The flood of written documents on PBTE could be subsiding, but the mass continues to be formidable. For example, in 1971 Allen Schmeider listed 22 items in his first bibliography on the topic, and 800 items two years later (Schmeider, 1974). In 1976, Cappuzzello and his associates identified over 6,000 items. Much, of course, was redundant, but it does reflect the increasing prominence of the movement during the first half of the decade of the seventies. While no data are available on the number of publications since 1976, an examination of indexes of journals and lists of published books suggests a continuing but perhaps decreased number of PBTE publications.

Research on Performance-Based Teacher Education

What have we learned from all these efforts? And what does the future hold for PBTE? The answer to both these questions are not clear-cut. Research on incidental/intentional learning and on Mastery Learning (Block & Burns, 1976) continues to favor objectives-based instruction. PBTE programs at the University of Nebraska (Sybouts, 1976, 297-304), San Diego State University (Smith and Nagel, 1979), and the University of Toledo (Dickson, 1979) are strong, productive programs while Illinois State University's program had to be modified significantly (Lorber, 1979, a, b). A dissertation study of the ISU program found that, although graduates of the program were able to outperform graduates of a traditional program, the extent of their enhanced performance was not statistically significant (Wiseman, 1974 as quoted by Lorber, 1979b). Donald Enos (1976) on the other hand, in comparing PBTE students at San Diego with students in the regular program, found that PBTE students had (1) significantly greater knowledge about teaching and learning, (2) significantly better verbal interaction with children, (3) significantly greater use of individualized instruction, and (4) significantly higher ratings of their performance from children they taught.

For all the action, all the emotion, all the commitment to PBTE, carefully controlled and documented studies are virtually non-existent. This is the tragedy of the decade. So much energy went into development that little was left for testing the effectiveness of various practices. We are left with a half-dozen general statements which tend to support the perceptions of those involved that PBTE is effective, but we have no

empirical evidence of why certain things work and others do not.

The Future of PBTE

As I have reviewed the development in a number of institutions during the past decade, I wonder how many shifts in programmatic thrusts occurred because of political reasons rather than educational reasons. In several, a change in leadership precipitated a power struggle that led to completely recast programs. The new leadership wanted its own personal mark on the programs, and in so doing, extinguished any contributions from the previous program. As a general practice, educators do not build on the work of others. New programs are based on new sets of competencies, new evaluation instruments, new structures, and new modules. Seldom (almost never) is one program, however effective, transferred to a new site. Each institution commits tremendous human and institutional resources into "reinventing the wheel." It is no wonder, then, that a major problem of many institutions is developer burn-out after a few years of intense effort.

Measuring performance is still the overriding problem in the movement, just as Elam warned us nine years ago (Elam, 1971). We have not defined competencies or performances adequately enough for reliable observations. With the exception of work at McBer and Company by McClellan and his associates (Pottinger and Klemp, 1976), instrumentation has remained fairly unimaginative. We could learn from efforts in other fields.

McAfee and Green (1977) described five steps they used in implementing performance appraisal for nurses. Prien, Jones, and Miller (1977) won the annual Research Award of the American Society for Personnel Administration for developing a behaviorally anchored rating scale. Their problem: develop a performance evaluation system that would be appropriate for a merit pay plan. The rating instrument was to be job-related in each of 14,000 positions in fourteen departments of a state government. While the roles and responsibilities ranged widely, subscores and total scores were to be based on a common numerical scale. Our problems in teacher education are no less complex than theirs, yet we seem to continue to design each evaluation instrument as though no one else had faced similar problems or designed data collection instruments. This practice leads back to reliance on several conventional and inadequate approaches.

In some related areas, progress is being made. Research on the effects of teacher practice on student learning has moved into a second stage of development during the past three years. Correlation studies are being supplemented by experimental research. Generalizations from studies of basic skills instruction in elementary grades are being tested with other concepts and age groups to check their generalizability (Brophy, 1979).

Finally, legal implications have assumed preeminence in all educational endeavors. Human subjects review and full disclosure to participants of the implications of a study are required in experimental efforts today. Teachers and administrators are more sensitive of their own legal rights and of those they contact. The greatly increased court dockets attest to this. A study we completed this spring indicated that, for the first time, legal responsibility was a recognized concern of beginning teachers (Felder, et al, 1980).

Individualization and self-pacing, while basic to the PBTE concept, have never been fully implemented in teacher education programs. Several programs permitted students to choose the time they would complete activities or use resources, but they were limited to the semester structure. I know of no programs in teacher education that fully committed themselves to the PBTE concept. Thus, in some ways, PBTE has never been fully tested as an instructional process.

The PBTE programs rely too heavily on modules and self-contained instructional resources. For some, PBTE equals modular instruction. Often hastily developed with few resources, modules do not have the sharpness of focus, the careful editing and attending to detail, or the innovative approach to complete successfully with commercial textbooks and slick audio-visual resources. As one educator told me last week, "They need to have life breathed into them." Modules require extensive effort to develop and are seldom tested and revised. Few have become more than local options. The modules developed at the National Center for Research in Vocational Education are clearly an exception to this. Their careful development is evident in their effectiveness with prospective and inservice teachers.

The major difference between the first half and the last half of the seventies is one of emphasis. The first half of the seventies was characterized by programmatic concerns in teacher education. Educators attempted to develop new and more effective curricula in teacher education. Improving the competence of teachers was viewed as the way to improve the education of the nation's youth.

But the latter half of the seventies was one of emphasis on governance. Teacher center advocates pressed for majority representation by teachers on committees and groups concerned with inservice or preservice education. The National Education Association was successful in the political realm as it led in the formation of the Department of Education at the federal level. When teacher educators gather together, it is not the program that is discussed, it is the evolving relations with the profession.

The shifting emphasis is a continuation of our search for the Holy Grail. At one time we were certain that curriculum materials for young people were the answer, with academicians assisting with "teacher proof" mathematics and science texts. Then we shifted to an emphasis on the teacher's competence as the answer, and now to the governance or structure

of the training arm of the educational profession.

What is needed in future developments is an integration of the various approaches so as to draw strength from the strengths of each. In this environment, PBTE will continue to contribute to improved education.

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A WORKING MODEL OF PERFORMANCE-BASED VOCATIONAL TEACHER EDUCATION

Glen E. Fardig

Department of Secondary and Vocational Education
University of Central Florida
Orlando, Florida

A Working Model of Performance-Based Vocational Teacher Education

Introduction

Two and a half years ago the University of Central Florida (or Florida Technological University, as it was then) had a respectable, albeit conventional, program of vocational teacher education. Now, thanks to a college administration at least willing to allow an innovative program to be attempted, a state department of education with enough foresight to provide financial support for program design and implementation, and a committed, creative, and hard-working staff of teacher educators, the new performance-based vocational teacher education program is a successful reality. The machinery of PBTE is running at full tilt; the steam is up, the gears are turning, whistles blowing, and production is hard-pressed to keep up with demand.

With special funding by the Florida Division of Vocational Education, the PBTE project at the University of Central Florida is right on schedule in its three and a half year plan. The project has three major goals, all of which are well on their way to realization:

1. To design and install a functional performance-based vocational teacher education program at the University of Central Florida. The program is meant to meet the needs of all vocational teachers in the University service area more satisfactorily than is possible with a conventional program. It is designed to exemplify and make operational the essential principles and best practices of PBTE, and at the same time be feasible, practical, and transportable.

2. To serve as a laboratory of PBTE implementation. A major purpose of the project is to identify implementation problems, develop solutions for those problems, and come to grips with the myriad details involved in organizing and managing a PBTE program. The project staff is also working to develop fresh approaches to the delivery of instruction and efficient administrative procedures, all of which may be applicable to programs in other institutions.

3. To evaluate the effectiveness of the program, and disseminate the product and results to the profession. As the first teachers complete the certification or degree program, plans for program evaluation will be put into operation. The State Department of Education and sister institutions in the Florida university system are being kept informed of progress, and reports are being made to the national teacher education profession through personal contact and in the professional literature.

The Program Design and Development

A detailed and thoroughly conceptualized technical plan was developed to help reach project goals. The selection of teacher competencies for the instructional program was an early and crucial step in the planned development process. While all vocational teacher education programs draw from much the same research base, UCF interpreted research results and selected program content in accordance with its students' needs, the local education setting, and institutional resources. This step required considerable time and professional commitment on the part of the UCF staff.

The UCF competency identification process followed that given in diagrammatic form in Figure 1. As a first step, nominated competencies were derived from a variety of sources; in particular, nationally recognized research efforts such as the Cotrell studies, the New England study of teacher competencies, the work conducted at Boston University, and the Florida CBITE study of competencies for trade and industrial teachers. All nominated teacher competencies were organized into a four-cell matrix as to whether they make a greater or lesser contribution to teaching success, and whether they must be taught early or can be left until later in the teacher's career.

The next step was to make an initial selection of competencies to be included in the program, and to organize them into manageable instructional units. Here some hard decisions had to be made. Although ideally the beginning teacher would be proficient in every known teaching skill from the first day he/she enters the classroom, in reality this is simply not possible. Therefore, the UCF vocational faculty, on the basis of its professional expertise and knowledge of the local educational setting, took on the task of selecting its unique set of competencies appropriate for the beginning teacher, and for each subsequent level of the total program. In order to meet Florida certification and accreditation regulations, a few special competencies (e.g., "Assist students in improving their reading skills") were included in the program.

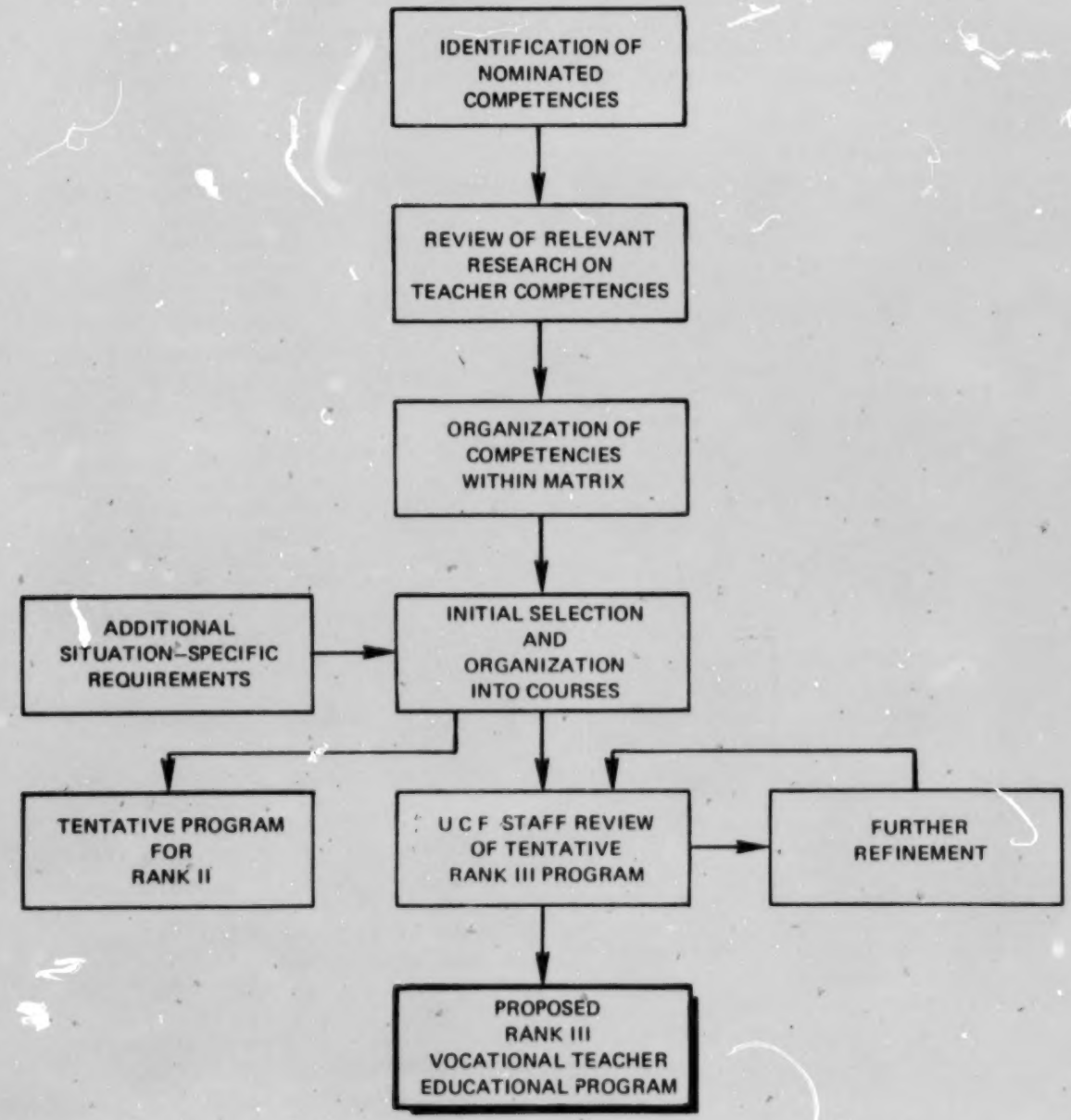
The process of revising, sequencing, and refining the competency structure proceeded through several versions until agreement was reached. Even so, program content is not thought of as being fixed and inviolate, and minor modifications are being made periodically to improve the program in the light of new knowledge, changing educational practice, and further experience in delivering instruction to teachers.

The selected competencies are organized into what are called "Competency Clusters" rather than "courses" in order to call attention to the fact that they are not structured or taught as traditional university courses. The various Clusters form programs for initial non-degree certification, an undergraduate degree, advanced certification, and graduate degrees. It is important to reiterate that we did not decide on a series of courses and then fill them with content competencies, but rather identified the competencies to be included in the total program and then grouped them into related and manageable units of instruction.

FIGURE 1

UNIVERSITY OF CENTRAL FLORIDA
PERFORMANCE-BASED VOCATIONAL TEACHER EDUCATION PROGRAM

PROGRAM DEVELOPMENT PROCESS


IDENTIFICATION OF NOMINATED COMPETENCIES
REVIEW OF RELEVANT RESEARCH ON TEACHER COMPETENCIES
ORGANIZATION OF COMPETENCIES WITHIN MATRIX
ADDITIONAL SITUATION-SPECIFIC REQUIREMENTS
INITIAL SELECTION AND ORGANIZATION INTO COURSES
TENTATIVE PROGRAM FOR RANK II
U C F STAFF REVIEW OF TENTATIVE RANK III PROGRAM
FURTHER REFINEMENT
PROPOSED RANK III VOCATIONAL TEACHER EDUCATIONAL PROGRAM

Each Cluster in the initial certification and undergraduate degree programs includes a number of required competencies and a group of other competencies from which the teacher is to elect a specified number. The required competencies represent those skills deemed essential for every vocational teacher, whatever his/her subject matter area or level. The elective competencies afford some opportunity for the teacher in training (with the aid of the Resource Person) to personalize his/her program. The elective competencies may be selected to meet the teacher's special needs, ("Student self discipline" for example, is usually selected by secondary teachers, passed up by community college technical instructors). The teacher may have personal interests (e.g., in bulletin boards and exhibits), or may wish to do some instructional experimenting (perhaps in programmed instruction). Altogether there are 48 required and 11 elective competencies in the undergraduate program. The idea of required and elective competencies has been well accepted by teachers, and not at all difficult for the staff to manage.

Somewhat more complex is the variable-credit concept built into the advanced certificate and graduate program. The competencies themselves are categorized as being increasingly difficult to achieve and more suitable for teachers with some background of teaching experience. The program is designed to be very flexible, as is appropriate at this level. A personalized program can be readily constructed of the small building blocks of competencies, rather than of whole university courses, in order to meet the personal, professional, and career goals of teachers.

In the variable credit concept, a program of competencies is worked out cooperatively by the teacher and Resource Person. Credits are awarded on the basis of specific competencies, each of which has been given a credit value. Certain requirements ensure that the teacher makes a rational and balanced choice of competencies to be achieved. A prearranged "Learning Contract" simplifies the guidance and management functions of this program.

The UCF Program Model

The UCF program is built on a two-level, two-phase instruction/assessment model. Phase I takes place in the university setting, and heavily emphasizes instruction, with an interim assessment being given for each competency achieved at the simulation or practice level. Phase II takes place in an actual school situation and includes some instruction and practice, but emphasizes the performance and final assessment of each competency. Thus, the program competencies are attacked twice, with sufficient time for recycling, practice, and internalization by the teacher. In actual practice, the teacher may be involved with some competencies at the Phase I level, and other competencies at Phase II. The diagram in Figure 2 should make this clear.

As he/she proceeds through the program, the teacher enrolls for a series of Clusters. We have found that after the first one ("Essential

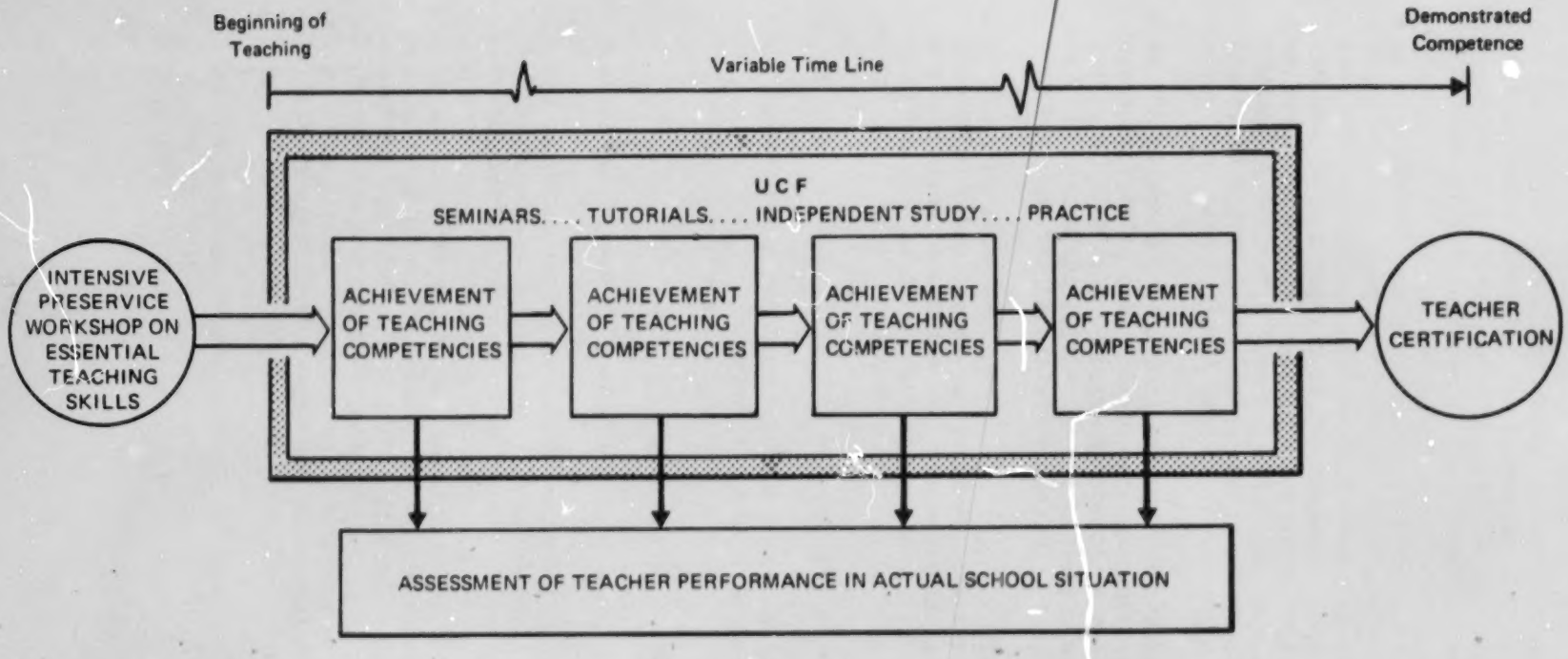

Beginning of Teaching
Variable Time Line
Demonstrated Competence
U C F
SEMINARS. . . . TUTORIALS. . . . INDEPENDENT STUDY. . . . PRACTICE
INTENSIVE PRESERVICE WORKSHOP ON ESSENTIAL TEACHING SKILLS
ACHIEVEMENT OF TEACHING COMPETENCIES
ACHIEVEMENT OF TEACHING COMPETENCIES
ACHIEVEMENT OF TEACHING COMPETENCIES
ACHIEVEMENT OF TEACHING COMPETENCIES
TEACHER CERTIFICATION
ASSESSMENT OF TEACHER PERFORMANCE IN ACTUAL SCHOOL SITUATION

FIGURE 2

UNIVERSITY OF CENTRAL FLORIDA
PERFORMANCE - BASED
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Skills") the order in which the teacher completes the Clusters is relatively unimportant. Each Cluster is organized around three basic instructional elements: (1) the PBTE instructional modules, (2) seminar sessions devoted to each module, and (3) individualized instruction and counseling. The modules, incidently, are used just as originally designed, with readings, teacher feedback, simulations, practice, and final performance all included.

Time for achievement is variable, each teacher being permitted to learn at his/her best rate. Achievement is constant; every teacher achieves every selected competency at the specified mastery level--there is no averaging of results. Similarly, when the teacher is ready to demonstrate proficiency in the actual school situation, each nominated competency must be demonstrated at mastery level.

When all of the requisite Clusters have been completed, the teacher is recommended for certification. Needless to say, the PBTE program is fully accredited, under the program approval clause of State accreditation standards. Degree seekers must, of course, satisfy all the usual university requirements, the courses for which are taught in more or less traditional modes.

Some six months of intensive effort were required for the initial program design and development phase. The model was then given a preliminary tryout during one Summer Quarter, with full scale operation beginning in the Fall Quarter of 1978. This was a very tight schedule, but it does demonstrate that major curricular change can be conceived and brought forth without a protracted gestation period. Although a great many small changes and modifications have been made as the program has grown and matured, we are pleased to find that our original basic thinking and planning has proved to be sound.

The PBTE Program Handbook

The program model is basically simple...getting it all to function smoothly isn't. The vocational staff has for the past two years been involved in continuing discussions of philosophical positions, policy matters, instructional strategies, and management procedures. All of this is both necessary and desirable in implementing a program that is breaking new ground. To bring order and continuity to the complex process, a PBTE Program Handbook has been developed, a copy of which is in the hands of each faculty member. As consensus is reached on a policy, or as some procedure is agreed upon, it is put in succinct written form, reviewed and approved by all, and inserted in the Handbook. By necessity in loose-leaf format, the Handbook is constantly growing and changing as older statements are revised, new decisions added, and the program continually refined.

The Handbook charts progress, records decisions, and provides reference information. Preparing a statement for the Handbook brings decision-making and closure to a topic or problem. The Handbook has contributed

greatly to the efficienty and amicability of the developmental process. In practical terms, the vocational staff members refer to the Handbook almost daily as they advise students, prepare for instruction, and go about the business of operating the teacher education program.

A similar program handbook is strongly recommended to others who are getting a PBTE program under way. While the specific content will, of course, be unique to each institution, the following classes of items have been found to be most useful:

1. Philosophical statements or assumptions about PBTE and the program
2. A program guide, showing all courses and their included competencies
3. Certification and graduation requirements for all included teacher education programs
4. Cluster offerings schedule, two years in advance
5. Program policies and regulations
6. Program management and record-keeping procedures
7. Standard forms used in the program

Future Program Developments

We quickly learned that no matter how thoroughly decisions are considered, or how carefully procedures are worked out and set down, the PBTE program is likely to be in a constant state of change. In addition to changes affected by greater knowledge and experience in operating a PBTE program, the university administration, the State Department of Education, and the legislature always seem to be changing the rules of the game. Once this is accepted rather than deplored, it can be seen as a stimulating force, both for the program itself, and for the teacher educators who conduct it. A few of the next major anticipated areas of change are described here:

- In the near future, Florida universities will be converting (actually, returning) to the semester system. Not only does this mean that practically every piece of paper used in the program will need to be revised, but that a thoroughgoing reorganization of the program will be required. The situation does, however, provide a logical point at which to review and refine program content and sequence.
- Schools in the State are moving rapidly, if uncertainly, toward competency-based vocational instruction. UCF is

moving to take a leadership position in preparing teachers for this approach, while at the same time meeting the needs of teachers in conventional programs. Additional competencies and new instructional materials are called for.

- We must urgently develop more instructional modules to fill the gaps in present available materials. We have determined that all new modules will be in the same format, and meet the same high standards as The National Center's module series. One module, "Assist Students in Improving Their Reading Skills," has been completed and is now undergoing field testing, six others are in process, but increased effort and support are needed.

- We are planning a cooperative program to extend PBTE concepts and practices to staff development programs in Florida community colleges. The PBTE approach has great potential benefits to college instructors, to community colleges, and to the University that have not yet been fully realized.

- UCF must consider new teacher education programs in additional occupational service areas (in particular, home economics and industrial arts) in order to serve expanding Central Florida educational systems.

Conclusion

Having developed a PBTE program model, installed it in the UCF setting, and having seen it produce vocational teachers, we believe we are justified in making a few tentative conclusions:

1. The UCF program embodies and exemplifies the essential principles and desirable characteristics of performance-based vocational teacher education.

2. The model appears feasible of installation and practical in operation. It constitutes a significant improvement in teacher education.

3. We are convinced that the model is transportable to a wide range of teacher education institutions, though each institution will want to adapt the model to its unique circumstances and resources.

4. Teachers are learning, and are succeeding in the profession. Teachers tell us that the program is relevant, applicable, and challenging in a way they have not experienced before.

5. We have just begun to make use of the potential of the PBTE approach to train whole new groups of professionals and to solve long-standing education problems.

The vocational teacher education staff at the University of Central Florida takes considerable professional pride in having worked hard to make the PBTE program move ahead so far, so fast. Personally, it has been a remarkable opportunity to see an educational idea progress from its research and development stage through to its implementation and institutionalization in an ongoing program. We know there is much more to be accomplished, and indeed, the task will never be completed. There is no thought of turning back...our driving concern is to move forward with even greater effectiveness and increased success.

DELIVERY OF INSTRUCTION IN PERFORMANCE-BASED TEACHER EDUCATION

Robert F. Paugh

Department of Secondary and Vocational Education
University of Central Florida
Orlando, Florida

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Delivery of Instruction
in
Performance-Based Teacher Education

Introduction

The focus of this paper is on how the University of Central Florida PBTE program delivers instruction to teachers in the eleven-county service area for which it is responsible. There are two major topics related to the delivery of instruction: (1) organizing the courses, or Clusters, and (2) seminars as the heart of instruction.

Organizing Courses or Clusters

The University of Central Florida is responsible for delivering courses in basic teacher certification in Trade and Industrial Education and Health Occupations Education to 11 counties in Central Florida. Approximately 90 percent of our students are teachers employed by public schools and community colleges who must take courses each year to gain initial certification or to be recertified. The problem we had delivering these courses was threefold. First, the geographical spread is such that there are great distances involved in traveling to and from different areas to teach courses. Second, and closely related, was the request by school personnel to provide courses in at least four different locations in Central Florida. Third, the actual number of teachers who needed certain courses at some of the locations was small. It was impossible to offer courses at these locations and expect to have the necessary enrollment to form a conventional class. Although we normally would have about ten to fifteen students wanting to take courses for certification or degrees, usually they needed different courses.

The performance-based teacher education program has provided an excellent solution to these problems for the University of Central Florida. We are now able to offer multiple courses in three locations in which UCF has branch campuses, i.e., South Orlando, Daytona Beach, and Brevard County. These centers are spread throughout our eleven-county service area in order to better serve the population of Central Florida. We offer courses in each of these centers on the same night of the week each quarter every year, so that students can plan on taking courses at a certain center on a particular night. All that really matters concerning enrollment is that we have about 12 or more individuals at any one center to justify the expense of a teacher educator delivering instruction. We attempt to form seminar groups of four to ten students for each course, but if we don't have enough people for this, we will work with one or two individuals as necessary. Since the Center Module Series forms the basis of our instructional program and seminars, we discourage working with one or two individuals. We are convinced that the dialogue and interchange of a small group seminar is an essential element of any PBTE program. There are, of course, times when a teacher must have a

certain course to meet a certification requirement; in which case we will allow that individual to enroll and will work with him/her on a one-to-one basis.

Seminars, the Heart of Instruction

The organization of seminars to deliver instruction requires considerable planning on the part of the faculty in order to deliver the right course, at the right time, at the right location. Seminars are organized based on course offerings at each of the outreach centers when students are available and when faculty is available. We do not know the exact time a certain seminar will meet until after registration takes place at that center.

As they enter the program, students are first required to take EVT 3371, Essential Teaching Skills for Vocational Education, which is focused upon the "survival skills" urgently needed by teachers as they enter the vocational classroom for the first time. We are able to get new teachers started in "Essential Skills" at any time in the quarter, as soon as they are on the job. This Cluster includes an extensive orientation to PBTE and to the UCF program. Examples of orientation activities would include the slide tape presentation, "U and PBTE" developed by the National Center for Research in Vocational Education, and a module walk-through. In addition, we are in the process of developing a special module designed to introduce teachers to the University of Central Florida and the Performance-Based Teacher Education Program.

The seminar is the heart of instruction, because it is here that interaction, enrichment and practice take place, making the competency meaningful, and the module come alive. Seminar times are approximately one hour in length, and meet each week for ten weeks, the length of the academic quarter in the Florida system. Each faculty member schedules time before and after every seminar for conferences and/or individual student discussions.

Seminar time is spent on many varied activities such as group discussion, student presentations, small group work, microteaching, practice, and problem solving. A primary purpose of the seminar is to shed as much light as possible on the competency through additional materials, outside experts, media, personal experiences, insights from students, and questions and problems. Very little time is used for lectures or formal presentations by the teacher educator/Resource Person. Module learning activities (e.g., critiques of case studies, developing plans) are done by students outside the seminar, but the activities do serve as a basis for group discussions.

Students are asked to study the module and other materials prior to the seminar. Each week seminar topics are assigned for following seminars, based on the progress of the group. Students can complete the work at their own learning rates, within University policies for incomplete grades.

Instructional Support

In order to make the seminars as effective and valuable as possible we have developed a PBTE Program Resource Book. The Resource Book serves as an instructional guide to faculty members as they plan and prepare for the seminar sessions. It helps ensure that all Resource Persons cover the same basic materials in a given Cluster and require the same final products or performances of students. For each competency included in the UCF program, the Resource Book contains a listing of required and optional reading materials specified in the module, and supporting material and media the faculty has found helpful. Also included are important topics for discussion, suggested instructional strategies, and elaborations of the required products or performances. An example of one competency as covered in the Resource Book is shown in Figure 3.

A "Resource Center" has been established at each of the University outreach centers so students can have access to the materials needed to complete the module activities and achieve proficiency in the competencies. In the Resource Center, a "Learning Box" for each competency in the program contains the readings, materials, media, and sample products for that competency. Each box (specifically, a standard library pamphlet file) is labeled as to its subject competency, and boxes are grouped into program Clusters to make them easy to locate. Students, therefore, do not need to hunt for materials, but can spend their time and effort in a more productive manner. Now that the UCF program has been in operation some time, students are making use of the Resource Centers and are finding them to be very beneficial.

Student Learning Activities

In order to provide necessary structure for the instructional program and to help students utilize their time efficiently, a "Progress Record Form" was developed for each course or Cluster. The Progress Record lists the required and elective competencies to be attained, and the specific product or performance the student must complete in order to demonstrate acceptable proficiency in each competency. The form also indicates which module is involved, and it provides spaces for entering the date the work is completed, the evaluation points awarded, and sign-off by the Resource Person. The student and the Resource Person both maintain this record of student progress. A sample of one such Progress Record is given in Figure 4.

There are many advantages in having a Progress Record in conjunction with the modules. Students know ahead of time exactly what products or performances are required, and how each product/performance will be evaluated. Students are not required to complete all the Self-Check items or other learning activities in the modules (though some do), but only the product/performance specified in the Progress Record.

FIGURE 3

INSTRUCTIONAL GUIDE SHEET

Competency Cluster: ESSENTIAL TEACHING SKILLS IN VOCATIONAL EDUCATION

Competency: Assess Student Skill in Shop/Laboratory

Module: D-4

Seminar Terminal Objective: After completing the seminar and discussion, construct a performance test for evaluating student achievement. Your performance will be assessed by your seminar professor, using the Teacher Performance Assessment Form, pp. 23-24 (Learning Experience II).

I. SUGGESTED RESOURCES

A. Handouts (Master File)

Information Sheet: Assess Student Skill in Shop/Laboratory

B. Audio-Visual Materials

Criterion Referenced Testing: Overview Facit

C. Equipment

Filmstrip projector and cassette tape player
Screen

II. DISCUSSION TOPICS

Two steps in deciding type of CRT evaluation

1. Examine objective(s) to determine type of learning (informational or performance)
2. Determine types of written or performance evaluation
   a. Types of written evaluation (EVT 3367)
   b. Performance evaluation

Elements of Performance Evaluation

1. Process (checklist)
2. Product (rating scale)
3. Performance Testing

Constructing Performance Evaluation Instruments

1. Objective(s) you are evaluating
2. List of materials, tools and equipment supplied
3. Criteria and sub-criteria
4. Evaluation strategy
5. Developing the instrument

III. INSTRUCTIONAL SUGGESTIONS

1. It is helpful to show the filmstrip at the beginning of the seminar because the content of the filmstrip and tape set the stage for discussion of criterion-referenced testing.

2. Suggest to students to review the materials in the Resource Center, both media and supportive readings.

3. Pass out handout for reference after showing the filmstrip and tape.

IV. REQUIRED PRODUCT OR PERFORMANCE ELABORATION

Be sure to discuss activities on Page 22 of the module to be sure students have proper direction. Student must develop a performance evaluation instrument which includes both a checklist and rating scale.

RESOURCE MATERIALS BOX

Competency Cluster: ESSENTIAL TEACHING SKILLS IN VOCATIONAL EDUCATION

Competency: Assess Student Skill in Shop/Laboratory

I. PRINTED MATERIALS

A. Module D-4 Assess Student Performance: Skills

B. Required Readings

None

C. Optional Readings

Boyd, Joseph L., Jr. and Benjamin Shimberg. Directory of Achievement Tests for Occupational Education. Princeton, NJ: Educational Testing Service, 1971.

Leighbody, G. B. and D. M. Kidd. Methods of Teaching Shop and Technical Subjects. New York, NY: Delmar Publishers, 1966.

Popham, W. James. Evaluating Instruction. Englewood Cliffs, NJ: Prentice-Hall, 1973.

D. Supportive Readings

Florida Department of Education. Determining Types of Tests to Use. Center for Studies in Vocational Education, Florida State University, 1978.

Florida Department of Education. Developing Performance-Rating Methods. Center for Studies in Vocational Education, Florida State University, 1978.

II. MODEL STUDENT WORK (PRODUCT)

Assess Student Performance - Learning Experience II

III. MEDIA

The Booklet and Cassette Tape, Criterion-Referenced Testing Competency D: Developing Performance Rating Methods Learning Option 2. Center for Studies in Vocational Education, Florida State University, 1977.

STUDENT PROGRESS RECORD

EVT 3366 INSTRUCTIONAL MATERIALS FOR VOCATIONAL EDUCATION

Student's Name _____ Soc. Sec. No. _____ Quarter _____

COMPETENCY	MODULE	PRODUCT REQUIRED	DATE COMPLETED	POINTS	EVALUATOR
Present Information with Models and Real Objects	C-22	With a Written Lesson Plan, Present Information with a Model or Real Object (L.E. II)			
Present Information with the Chalkboard	C-29	With a Written Lesson Plan, Present Information with the Chalkboard (L.E. II)			
Prepare Teacher-Made Instructional Materials	B-6	Prepare Masters and Copies for Each of the Four Types of Duplicating Machines (L.E. III)			
Present Information with Overhead and Opaque Materials	C-23	1. Set Up and Operate an Overhead Projector, to be Checked by a Resource Person (L.E. I) 2. Set Up and Operate an Opaque Projector, to be Checked by a Resource Person (L.E. III)			
Present Information with Films	C-25	Set Up and Operate a Film Projector, to be Checked by a Resource Person (L.E. I)			
Professionalism	-	Professional Rating by Seminar Professor			
Elect 3					
Prepare Bulletin Boards and Exhibits	C-21	1. Prepare a Bulletin Board (L.E. II) 2. Prepare an Exhibit (L.E. III)			
Present Information with Filmstrips	C-24	1. Set Up and Operate a Filmstrip Projector, to be Checked by a Resource Person (L.E. I) 2. Set Up and Operate a Slide Projector, to be Checked by a Resource Person (L.E. III)			
Present Information with Video Materials	C-27	Set Up and Operate Videotape Equipment, to be Checked by a Resource Person (L.E. I)			
Employ Programmed Instruction	C-28	Develop a Written Rationale and Plan to Employ Programmed Instruction (L.E. II, Special Checklist)			

TOTAL / AVERAGE

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FINAL GRADE _____ _____ (signed) (date)

FIGURE 4

There are no extra points given for early completion of the modules, and likewise, there are no penalties for those who take longer than average. Students must understand, however, that if they do not achieve all the required competencies in any Cluster by the end of the quarter in which they are registered they will receive a grade of Incomplete (I). If they still have not completed the work during the period specified in the college catalog (about ten weeks) they will have to again pay for the Cluster to receive credit. In that case, students start where they left off and do not have to redo everything again. There is never a penalty for repeating a product or performance that does not meet the criteria in the Teacher Performance Assessment Form on the first attempt.

Summary

There are a number of important elements in the UCF instructional program; the instructional modules, support materials, resource center, instructional seminars, and the Resource Person. It is the seminar that is the heart of instruction, without which the PBTE program would be a routine and mechanical process. It is the experienced, well-prepared, and concerned teacher educator, in the form of a Resource Person, that makes it all possible.

TEACHER ASSESSMENT
IN THE UNIVERSITY OF CENTRAL FLORIDA
PERFORMANCE-BASED VOCATIONAL TEACHER EDUCATION PROGRAM

Steven E. Sorg

Department of Secondary and Vocational Education
University of Central Florida
Orlando, Florida

Teacher Asessment in the UCF Performance-Based Vocational Teacher Education Program

Two major factors were considered when planning teacher assessment in the PBTE program at the University of Central Florida. First was the principle that teachers must be able to perform specified competencies in an actual classroom situation. Secondly, the instructional delivery system was to be primarily based on small group seminars with discussions, practice, and simulated teaching situations. These two factors required that teacher assessment be divided into two separate phases; seminar assessments, and Directed Field Experience assessments.

Seminar Assessments

In the seminar setting, teachers are assessed on their ability to develop written plans and products, to demonstrate specific teaching skills, or to demonstrate skill in the use of various types of instructional equipment.

As teachers enter the UCF program, they come with a variety of backgrounds, abilities, and previously developed skills. It is conceivable that a preservice or inservice teacher may already possess the skills necessary to successfully demonstrate some of the competencies in the PBTE program. For this reason, provision has been made for teachers to "challenge" competencies in the seminar sessions. Challenging is accomplished by providing copies or documentation of product or plan developments, and by demonstrating teaching skills prior to seminar discussion sessions. Typically, teachers have challenged competencies involving the development of curriculum materials, planning documents, and skill performances on audio visual equipment. While challenging is open to all students and has been used by some, it has not been used to its full potential by the majority of students in the program.

Regardless of whether a teacher challenges competencies or attends seminars and attempts competencies at his/her own pace, assessment is accomplished using checklists from appropriate learning experiences in the instructional modules, Teacher Performance Assessment Forms (TPAF's) from the modules, or special checklists developed at UCF. The checklists are used to determine whether or not a teacher has completed all necessary steps in a performance or addressed all necessary topics in a written product. Most modules used in the program have learning experiences appropriate for seminar assessment, and final experiences equally as appropriate for final assessment in an actual classroom situation. As a result of evaluating the program after one full year of implementation, however, it was agreed that a few modules did not provide activities and appropriate checklists suitable for seminar assessment. The UCF staff has developed a few alternative activities and special checklists to be used in conjunction with these modules in the seminar setting.

The actual assessment process of both products and performances starts with observation by the seminar Resource Person. That is, the written products are read and performances are observed using the module or special checklist as a guide to ensure that the product or performance is complete and has included all important elements. If a product or performance does not meet all necessary criteria on the checklist, the seminar Resource Person may recycle the teacher, requiring that the entire product or teaching performance, or any portion thereof, be redone. Teachers must then resubmit a written product or demonstrate again the required performance. When a product or performance meets all necessary checklist criteria, only then is its quality rated by the seminar Resource Person.

Grading procedures, including a product rating scale and a professional rating scale (Figure 5), were developed to help ensure uniform evaluations by different Resource Persons. The product rating scale is used as a guide to the assignment of numerical ratings (4,3,2) which equate to A, B, and C grades. Note that D and F grades are not used; such products are simply not accepted for grading. All products and performances are rated individually.

A professional rating of each teacher is also given by the seminar Resource Person. This professional rating addresses criteria in the affective domain. Again, a numerical rating is used. Final seminar grades are calculated by averaging points accumulated by completion of required products and performances and the professional rating.

Directed Field Experience Assessments

The Directed Field Experience portion of the PBTE program at UCF is founded on the principle that the teacher must be able to perform specified teaching competencies in an actual school situation. This principal takes the teachers a step beyond the simulated situation of the seminar.

The complete 35 credit hour regular certificate program contains 45 competencies to be achieved. These 45 competencies can be grouped into three categories for the purposes of final assessment:

1. twenty-three competencies that are deemed critical to teacher success and effectiveness and that must be assessed in an actual school situation if assessment is to be a valid indication of teacher proficiency

2. eleven competencies that can be satisfactorily evaluated in the practice and simulation activities of the seminars, and may only need to be rechecked or reviewed in the field setting (These competencies tend to be those involving planning, or the production of some form of instructional materials.)

FIGURE 5

PERFORMANCE-BASED VOCATIONAL TEACHER EDUCATION PROGRAM
GRADING PROCEDURES

The PBTE Program is comprised of Competency Clusters, with quarter hours of college credit awarded for successful completion of each Cluster. To award appropriate credit and a grade for each Cluster, a rating scale with a description of each value has been developed. Each product or performance within a Cluster is to be assigned quality points as per the Product Rating Scale Description. An additional factor, equal in weight to one module, will be the faculty member's judgment of the teacher's professionalism, as described in the Professional Rating Scale.

To compute a final grade, points assigned for each product or performance completed will be totaled. Points for the Professional Rating will be added, and the result divided by the number of competencies in the Cluster, plus one. The computed value for the Competency Cluster will be assigned a final letter grade according to the following grading scale:

3.6	through	4.0	=	A
2.7	through	3.5	=	B
2.0	through	2.6	=	C

Points	PRODUCT RATING SCALE DESCRIPTION
4	The product or performance is at a level of proficiency such that it could serve as an example or model of competence for other teachers. Meets all checklist criteria at the EXCELLENT level.
3	The product or performance is at a level of proficiency expected of a competent beginning teacher. It is fully satisfactory, meets all criteria on the checklist, but includes some deficiencies.
2	The product or performance is at a minimally acceptable level for a beginning teacher. It includes some significant deficiencies of conceptualization or presentation. Meets criteria on the checklist at a minimal level.

Points	PROFESSIONAL RATING SCALE DESCRIPTION
4	The attitudes and behaviors of the teacher are fully professional. The teacher participates constructively in every seminar session, maintains a regular schedule of completed tasks, completes written products with an appearance of high quality, and gives evidence of an enthusiastic and positive attitude toward teaching and learning.
3	The attitudes and behaviors of the teacher are those generally expected of a teacher in the profession. The teacher participates in most seminar sessions; he/she usually completes tasks on schedule; written products are of satisfactory appearance; there is evidence of a generally positive attitude toward teaching and learning.
2	The teacher shows evidence of being minimally professional in attitude and behavior. The teacher participates infrequently; some contributions tend to be counter-productive; the teacher allows work to accumulate before completing it; products have deficiencies in presentation and appearance; there is some evidence of lack of a positive attitude toward teaching and learning.
0	There are serious questions about the teacher's professional attitudes and behaviors. The teacher should rethink his/her professional responsibilities and career goals.

3. eleven competencies that form the "Electives" of the PBTE program, and that the teacher may wish to attempt for a variety of personal or professional reasons (The elective competencies provide an opportunity for the teacher to experiment and attempt to develop new skills in the practice or simulated setting without final assessment in the field. Elective competencies will therefore be assessed in the seminar setting, and not in the actual school situation.)

The 23 competencies designated as requiring assessment in an actual school situation tend to directly involve students in the performance by the teacher. While these competencies have been compared to, and found to be very similar to, instructional competencies required of teaching personnel in the UCF service area school districts, they are to be considered a minimum. Individual school systems or community colleges may wish to add specific program competencies for field evaluation to meet their special needs or concerns. This can be negotiated and arranged between the institution and the UCF program director. The selection of competencies for field assessment represents our best professional thinking at this stage in the development of the program. As we gain experience, and as program evaluation and research results become available, the field-assessed competency list may be revised.

All teachers taking the complete (35 credit hour) regular certificate program at UCF will take nine credit hours (on a variable basis) of Directed Field Experience. Teachers may register for credit in the Directed Field Experience upon guidance from and mutual agreement with their University Advisor (Learning Manager). The purpose of the Directed Field Experience is for the teacher to demonstrate in an actual school situation designated competencies previously mastered in simulated or seminar sessions. The major focus of this portion of the program is on evaluating these specific teaching skills rather than attempting to evaluate overall professional and personal behaviors in the school setting.

Inservice teachers working toward vocational certification will demonstrate teaching skills during the Directed Field Experience in their own school and classroom. It is possible, however, for teachers to borrow other classrooms for some activities. Preservice teachers working toward vocational certification will be placed in a teaching setting for evaluation of teaching skills by the University Coordinator of the Directed Field Experience.

There are four persons taking an active part in the Directed Field Experience. They are the Learning Manager, the University Coordinator of the Directed Field Experience, the Field Rsource Person, and the student (teacher). Following are descriptions of the roles and responsibilities of each participant in the field experience portion of the program.

University Advisor (Learning Manager).--All faculty members in the vocational program are to serve as Learning Managers for teachers seeking degrees or certification in Vocational Education. The role of the Learning Manager will include the management of teacher learning experiences through program planning, advisement, and the monitoring of progress.

The responsibilities of the Learning Manager during the Directed Field Experience portion of a teacher's program are:

1. assist the teacher in selecting appropriate competencies and times for Directed Field Experience

2. work directly with Field Resource Persons during Directed Field Experience, and participate in observation and assessment of the performance of the teacher as appropriate

3. determine grade (S/U/I) for Directed Field Experience of the teacher through cooperation/consultation with the Field Resource Person

University Coordinator of the Directed Field Experience.--One faculty member in the vocational program is to serve as Coordinator of the Directed Field Experience for teachers seeking degrees or certification in Vocational Education.

The responsibilities of the University Coordinator of the Directed Field Experience are:

1. identify potential Field Resource Persons

2. provide training for Field Resource Persons (credit course, workshops, or individualized)

3. serve as liaison between UCF and school districts or institutions within service area

4. arrange for teaching setting and/or Field Resource Person for final assessment during Directed Field Experience

5. make observations (as necessary) of teacher performance during Directed Field Experience

6. oversee and coordinate the procedural aspects of the Directed Field Experience program

Field Resource Person.--At least one person within each teaching unit (county, school or postsecondary institution) in the UCF service area will be recruited and trained as an in-school or Field Resource Person. Persons identified may be principals or directors, assistant

principals, district supervisors/coordinators, or master teachers. Persons volunteering to serve as a Field Resource Person will participate in a training program designed to familiarize them with the basic concepts of PBTE, UCF's PBTE program, and the modular materials used during the Directed Field Experience.

The responsibilities of the Field Resource Person during the Directed Field Experience are:

1. work directly with the Learning Manager of the inservice teacher
2. help teacher by assisting in arrangement for access to equipment and materials as necessary
3. act as consultant to teacher on completion of modules through review of materials and direct feedback
4. assist teacher in arranging for observations or interview activities
5. help teacher select elective competencies
6. assess teacher performance during final experience, using TPAF provided by teacher
7. provide appropriate feedback to teacher after observation/assessment
8. report the results of the assessment to Learning Manager

Of primary concern to the PBTE staff at UCF as at other teacher training institutions is the desire to provide the teaching profession with competent beginning vocational teachers. To help meet that end, it was felt that a close working relationship must be established with the school districts within our service area. What better way to develop that relationship than by involving local school districts in our program. These school districts share with us the desire to have competent beginning teachers for their growing numbers of vocational programs. This point was the major factor in the decision to use local school district personnel in the field assessment phase of our program. Another factor adding to this decision was that there are insufficient resources at UCF to allow faculty or staff to cover the rather large geographic area and numbers of programs in our service area.

Field Resource Persons are identified cooperatively by the district and UCF and then trained in the assessment process. Again, the major focus of this program is on evaluating specific teaching skills rather than attempting to evaluate overall professional and personal behaviors in the school setting. With only a very small number of teachers participating in this final portion of the program to the present date, we

still have no data on how well these field resource persons will work out. It should be noted, however, that a very positive reaction toward the concept and plan has been received from the school districts within the UCF service area.

Teacher.--The responsibilities of teachers seeking degrees and/or certification in Vocational Education during the Directed Field Experience are:

1. work cooperatively with the Learning Manager in selecting appropriate competencies and/or times for Directed Field Experience

2. arrange an observation agreement with a Field Resource Person for final assessment of teaching performances during Directed Field Experience (The agreement should be completed during the quarter before the observations are to take place.)

3. provide necessary materials, including the TPAF, for the Field Resource Person for proper assessment of teaching performance

4. arrange with the Field Resource Person as to the time for assessment of teaching performance during Directed Field Experience

More detailed descriptions of program policies and assessment procedures regarding the Directed Field Experience are included in Figures 6 and 7 respectively.

FIGURE 6

DIRECTED FIELD EXPERIENCE PROGRAM POLICIES

1. All teachers taking the complete (35 hour) Regular Certificate Program at University of Central Florida are required to complete a total of nine credit hours of Directed Field Experience (EDG 4941), and all degree-seekers twelve credit hours. This requirement holds, whatever the previous experience or the ability of the student.

2. Teachers will normally register for three-hour blocks of credit. Approximately eight competencies will be considered a normal load for any one Quarter. All competencies will be considered as of equal weight (of difficulty) for this purpose.

3. In all cases, all 23 specified competencies (32 for degree-seekers) must be satisfactorily demonstrated in an actual school situation before program and certification requirements will have met.

4. The teacher and the Learning Manager will negotiate an agreement as to which competencies the student will demonstrate in the Quarter. The competencies selected must be from among those the teacher has already achieved in the seminar setting, but they may be from any Cluster, and in any sequence.

5. A contractual agreement, on a standard form, will be completed by the Learning Manager, specifying the competencies the teacher has agreed to demonstrate during the Quarter. The contract will be signed by the teacher and Learning Manager.

6. All competencies specified in the contract shall be satisfactorily achieved in the actual school situation before the appropriate credit is awarded. If a teacher fails to achieve any competency during the Quarter, he/she will be given a grade of "I" (Incomplete) for the Quarter. The regular University rules for changing the I to a grade of "S" (Satisfactory) will then apply.

7. If a teacher fails to achieve the necessary competencies within the given period, the I remains in the record. The teacher must then re-register for the three hours of Directed Field Experience and pay the usual tuition fees.

FIGURE 7

DIRECTED FIELD EXPERIENCE ASSESSMENT PROCEDURES

Typically, the assessment of the teacher's performance in an actual school situation will take place as follows:

1. The teacher will prepare for assessment as suggested in the module that covers the competency to be assessed. This may entail developing plans, practicing in the classroom, gathering documentation, or other activities.

2. When the teacher is ready to demonstrate the competency he/she will contact the Field Resource Person to arrange the date and time that assessment is to take place. The teachers will furnish the Field Resource Person with a copy (original or Xerox) of the appropriate Teacher Performance Assessment Form (TPAF) from the instructional module for that competency and the module if specifically requested.

3. The Field Resource Person will arrive at the classroom in time to examine plans for the lesson or other prepared work, then will observe the teacher's performance without participating or interfering in any way. It is recommended that any items on the TPAF which are not applicable (N/A) for assessment purposes be discussed and agreed upon by the teacher and Field Resource Person prior to observation of performance.

4. After the lesson, the Resource Person will complete the TPAF and will determine the overall rating for the performance.

5. The overall rating for each competency will be either Satisfactory (S) or Unsatisfactory (U). If Satisfactory, that will be so marked on the TPAF. If Unsatisfactory, nothing will be recorded, but the teacher will be required to repeat all or part of the performance at a later time until competence is achieved.

6. A conference will take place between the teacher and the Resource Person as soon as possible after the lesson. TPAF items requiring clarification or discussion will be completed at that time. The teacher will be fully informed about the results of assessment.

7. If the overall rating is Satisfactory, the Resource Person will mail the completed TPAF to the University Coordinator of the Directed Field Experience who will enter it in the teacher's record file.

DEVELOPMENT OF THE SPECIAL HEALTH OCCUPATIONS PROGRAM AT THE UNIVERSITY OF CENTRAL FLORIDA

Mary Lou Park

Department of Secondary and Vocational Education
University of Central Florida
Orlando, Florida

Development of the
Special Health Occupations Program
at the
University of Central Florida

Background

Historically, Health Occupations teachers have received much the same pedagogical training as teachers in other vocational fields. The assumption was that all would benefit equally from the same type of preparation program, although there was an uneasy feeling (especially among Health Occupations teachers) that this was not so. During the Spring of 1978, a new and complete performance-based teacher education program was being developed at this university. A series of conversations led to the conclusion that not enough was being done for Health Occupations teachers. As a result, it was agreed that the needs of this group should be investigated. The rationale was that if there were teaching competencies unique to Health Occupations teachers, then these could be identified, and once identified, instruction could be given which would enable teachers to master the skills and improve their teaching performance.

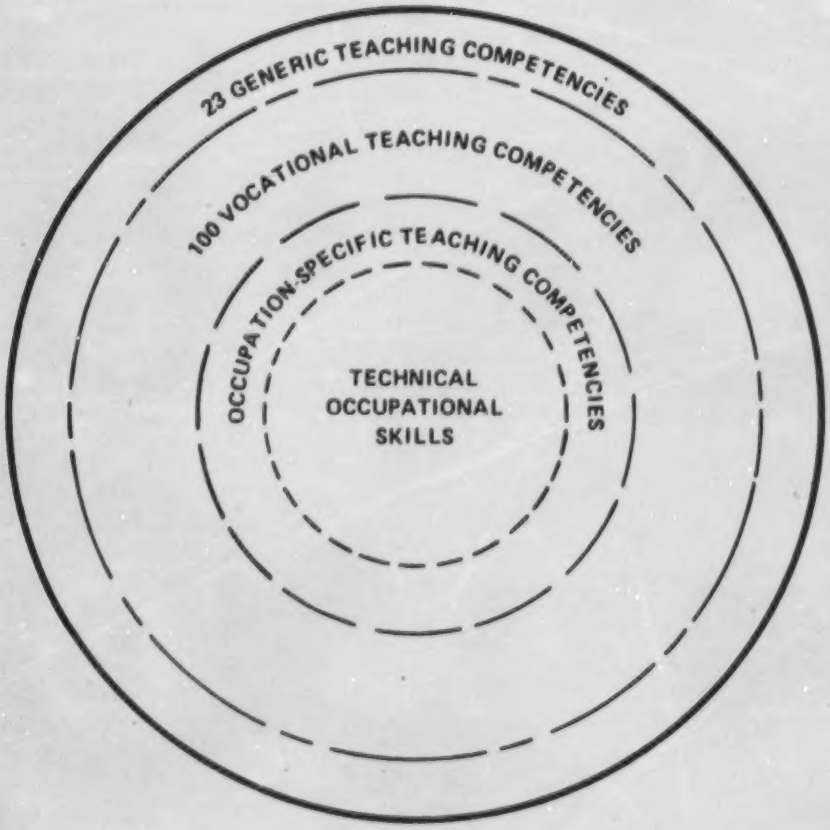
Classes of teaching competencies, their relationships, and where the occupation-specific teaching competencies fit are graphically displayed in Figure 8. A point to be made is that the diagram moves from the specific (in the center) to the general (the outer band). The core of vocational instruction in the center encompasses the technical skills found within the instructor's specific occupation. These are brought by the instructor to the vocational classroom and applied in the vocational training program. "Prepare a blood specimen for analysis" is an example of one such technical skill needed by instructors in medical laboratory aide programs. Much attention has been given to the identification of specific technical skills for various occupations.

The second band in the diagram addresses our particular area of concern--the occupation-specific teaching competencies. Here are found those skills or teaching competencies which are unique or have special application to an occupational area. It is recognized that many vocational areas may require special teaching skills. In Health Occupations, a special teaching skill might be "Prepare students for patient contact"; in Auto Mechanics, an example might be "Organize shop management procedures for live work."

Teaching competencies common to all vocational teachers are in the next band. The reference is to the widely accepted 100 competencies of the National Center's Performance-Based Teacher Education Curricula Program which in turn are module titles. The 100 competencies are a composite of the 384 performance elements identified in the well known Cotrell studies. An example of a common vocational teaching competency is "Supervise activities of the student vocational organization," which covers eight performance elements. There are no clear or definite

FIGURE 8

CLASSES OF TEACHING COMPETENCIES FOR VOCATIONAL INSTRUCTORS



UNIVERSITY OF CENTRAL FLORIDA
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divisions between classes, thus the broken lines. The indication here is that teacher competencies constitute a continuum, leading from one class to another. For instance, all vocational education teachers maintain a security system for supplies and equipment, but there are special precautions for drugs and related paraphernalia, such as needles and syringes, that are unique to Health Occupations instructors.

The outer band in the diagram refers to teaching competencies which are common to all teachers, vocational or non-vocational, elementary to postsecondary. The Florida Council on Teacher Education (COTE) has identified 23 generic teaching competencies which, along with their 130 subskills, are to be used as criteria for approval of teacher education programs.

The Competency-Identification Process

The ultimate value of any performance-based (or competency-based) teacher education program is determined by the validity of the competency list upon which the program is developed. This crucial point is often missed by program developers. The process briefly described here was undertaken to identify a valid list of teaching skills unique to Health Occupations teachers, but it is apparent that the same process would be equally useful for identifying teaching skills in Agriculture, Business and Office, or any other vocational area. Figure 9 describes the process in graphic terms.

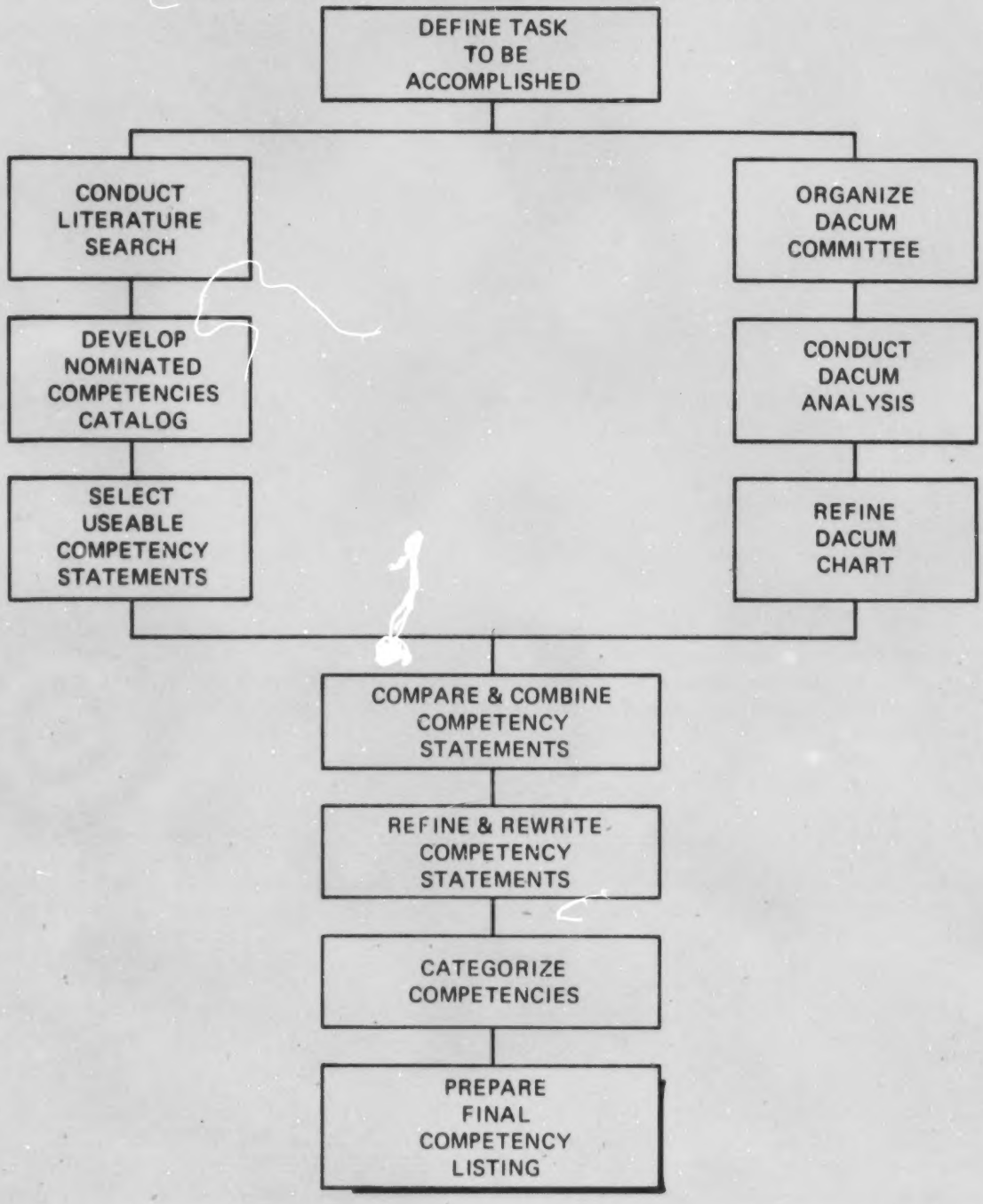
In defining the task to be accomplished, it was decided that Health Occupations teachers were not adequately considered in vocational teacher education programs because it had been previously assumed that "they are like others." Our assumption was that this group has a unique background, with special needs and abilities making them unlike others. This relates to our goal of improving teacher performance by installing a complete performance-based teacher education program.

The first major step in the process, the literature search, was of great interest. At this point, it was not known if the work had already been done. If it had been, perhaps research results which could be adapted, or concepts, tasks, or related materials would be found. As it turned out, the extensive literature search resulted in findings which were far-ranging, but far from complete. A nominated competency catalog of about 250 items was assembled. Many competency statements were duplicates or very similar to each other. The statements covered a range from the general and vague, to the specific or trivial. Altogether, they could not form the basis of an instructional program.

Convinced, however, that the specific competencies did indeed exist, a plan for the identification process was developed. The major tool to be used was the DACUM analysis. In explanation, DACUM is an acronym for "Developing a Curriculum" and has been proven to be a valid, cost-effective method for identifying tasks in an occupation. The technique has been

FIGURE 9

HEALTH OCCUPATIONS
TEACHING COMPETENCY IDENTIFICATION PROCESS



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used by the Nova Scotia New Start Program since 1971, and has also been applied by the National Center for Research in Vocational Education for identifying vocational administrator competencies. The basic concepts of a DACUM analysis include the utilization of a modified brainstorming technique with a small group of occupational experts in a two- or three-day session chaired by a neutral facilitator. The product of analysis is a chart of broad categories and specific tasks.

The DACUM analysis carried out at UCF was conducted by Lawrence Coffin of Holland College, Prince Edward Island, Canada in a two-day session. A twelve-member committee was selected, and they succeeded in generating 12 categories of teacher competencies with some 131 competency statements. This seems like a brief statement to cover two days of intense concentration by the participants, which left them all with a feeling of great weariness but considerable professional satisfaction. The number of competencies was also surprising, for no one had thought that such a volume of material would be generated.

The next phase consisted of comparing and combining the statements derived from the literature and those developed in the DACUM analysis. Obvious duplications were eliminated, and statements which were similar were combined. Other statements from the literature were cut because they did not meet established criteria. The criteria specified, among other things, that the competency must describe observable teacher behavior, must be useable for training purposes, and must involve teacher skills as opposed to health-practitioner skills. All competency statements were then subject to thorough review and rewriting to maintain an approximately constant level of specificity and similarity as to form. The final list of 89 competencies unique to Health Occupations teachers was organized into eight broad categories and was completed in September, 1978. The complete list is available from the University of Central Florida, Department of Secondary and Vocational Education.

Organizing the Instructional Program

Using the UCF list of 89 competencies, the assignment now became one of developing the coursework for Health Occupations teachers within the framework of the existing performance-based certification and degree programs. After careful study, the competencies were grouped into "families" which would become material for modules of instruction. It was gratifying to see the majority of the items fall into a logical sequence and pattern. This phase generated thirteen tentative module titles, which on closer examination again appeared to naturally separate out into three clusters of instruction with but one module left over. With but this one exception, the major stress was directed toward the area of clinical teaching.

It was obvious that certain teaching skills were essential to the beginning Health Occupations teacher taking the basic certification package, yet there wasn't room within that package for an entirely new

course (or "Cluster"). The solution to the problem of "no room in the inn" was to organize the proposed modules into three Clusters; one undergraduate, and two at the graduate level. The undergraduate Laboratory Management Cluster originally designed for T & I teachers was reorganized to delete competencies not needed by Health Occupations teachers because of their previous training and experience (e.g., "Provide for first aid needs..." and "Provide for student safety"). This allowed the three modules appropriate for the clinical laboratory to be included. The newly restructured Cluster, "Preparation for Clinical Teaching in Vocational Education," will now be taken by all Health Occupations teachers working toward certification and/or the bachelor's degree. Additionally, it has been designated as a Special Methods course by the state certification office. The UCF Health Occupations program profile sets out the entire program, and designates the competencies included in each Cluster.

The two Clusters for advanced students, "Applied Clinical Teaching Techniques," and "Clinical Coordination for the Health Occupations Teacher," may be taken for inservice credit, as an elective in the undergraduate degree program, or in the master's degree program. The thirteenth module referred to earlier, and concerned with selecting students for Health Occupations programs, has been inserted into an appropriate existing Cluster. A few individual competencies which did not seem to fit neatly into any of the groupings will be applied to other Clusters.

The Cluster, "Preparation for Clinical Teaching," was recently offered for the first time, following the regular UCF format of seminar sessions and individual conferences. As the modules were in the writing process, students struggled a bit with rough drafts of learning activities and few, if any, checklists. However, from the response in the seminars it was obvious that the Health Occupations students appreciated having materials written just for them, and which related so well with their teaching. Students commented on how good it was..."being with all Health Occupations people," and "How I wish I had had this material before!"

Summary

So, here is where we are now--competencies have been identified and organized into modules and Clusters...the first three modules written in the Center format are nearly finished, designed to be of the same high quality as the others...work on the remaining modules is being continued, and they will be available to other vocational teacher education programs in the future. There is a steady growth in the number of vocational Health Occupations programs in the Central Florida area, which indicates that there will be a continuing need for the special Health Occupations teacher training courses. New teachers will need instruction for certification, others will be in need of inservice course work for recertification, relicensure and for improving their professional skills. We are ready to meet their needs with special Health Occupations Clusters in a certification package, a bachelor's degree, and a Master's of Arts or

Sciences degree. We have a Health Occupations person on the faculty... someone with whom the teachers can identify.

Two years ago, this program started off with a vague notion that the needs of Health Occupations teachers were not being adequately met. Now there is a different feeling. The future looks bright, we're prepared, and we're feeling good!

THE RIGHT COURSE, IN THE RIGHT PLACE, AT THE RIGHT TIME

Harry O. Hall

Department of Secondary and Vocational Education
University of Central Florida
Orlando, Florida

The Right Course, in the Right Place, at the Right Time

Background

The purpose of this paper is to provide a background on some of the administrative procedures that the staff have used to initiate and implement the Performance-Based Teacher Education (PBTE) program at the University of Central Florida. Similar procedures may well have application in other university settings. I have titled my paper as "The Right Course, in the Right Place, at the Right Time"...a title which will have more meaning when it is fully understood how our traditional vocational teacher certification program was delivered, and how we were able to change by using the PBTE approach.

The entire vocational certification course sequence is taught through outreach methods. We serve essentially three separate outreach centers - South Orlando, Daytona Beach and Brevard, which are located from 20 to 50 miles from the main campus. In the former conventional program we had about five courses, and our staffing level permitted us to deliver the full certification sequence every two years. Viewed from the student's perspective, it was possible to enroll in a certification course about every other quarter, but there were no provisions for adjustments to special needs. For the beginning vocational teacher, it was particularly frustrating knowing that the course in methods, needed today, might not be available for two years. Our staff had similar frustrations. Unlike most other teacher education students, vocational teachers are almost always hired direct from industry and begin their program of teacher training after they are employed as teachers. Their instructional needs are real, the help they need is for tomorrow's class, all of which make them impatient with course content on teaching which does not have relevance to immediate problems and needs.

PBTE Courses and Credits

The foundation of the PBTE program is a set of 34 vocational teacher competencies selected by the vocational staff. We reviewed major research studies, examined Florida certification requirements, and considered our own professional biases in reaching consensus on these competencies. Our original thought was that we could have vocational teachers establish their own competency sequence, then complete their training competency by competency until all 34 were achieved. This proved unfeasible, because it lacked the structure of courses and credits. These two elements may be unnecessary in a PBTE program but are required in a university setting because courses and credits are the common currency for important business such as faculty assignment, funding, student transfers, and so forth. In order to communicate with registrars, comptrollers, and certification personnel and still maintain a performance-based approach, we redefined (or better, more precisely defined) the college credit.

To facilitate instruction, the 34 competencies were arranged in logical groups--we call them "Competency Clusters." A credit value was assigned to each Cluster based on the amount of time field-test students reported it takes to do the instructional modules in a given Cluster. For example, the first and prerequisite course in the UCF PBTE program, "Essential Teaching Skills in Vocational Education," is rated at four quarter hours. A new vocational teacher starts in this six-competency cluster, expecting to spend about 30 to 40 hours working in modules and about ten hours in seminar sessions. The 40 to 50 hour total is a reasonable definition of four quarter hours of credit. We have continued the module time-completion studies by having our students do a time estimate along with their evaluation of each module. These data will be used as a basis for program revision, in the coming conversion from the quarter to the semester system.

Open-Entry/Open-Exit

Normally, open-entry is only needed by new teachers. By scheduling the "Essential Skills" Cluster each quarter at each of our three outreach centers, a new teacher always has access to instruction in basic teaching skills. If a new teacher starts on the job after university registration has closed for the quarter, he/she can start course work immediately, then enroll for the Cluster officially in the next quarter. In special circumstances, any Cluster is available to our students at any time. We do limit this to emergency cases because we found out early that scheduling the entire PBTE Cluster sequence at every registration causes undue and unnecessary hardship on the vocational faculty and on the administration. We have found it necessary to schedule only "Essential Skills" each quarter, while all others come in waves of three or four Clusters. The entire sequence is cycled at each outreach center about once a year. By publishing a two-year Cluster sequence we have made it an easy matter for students to plan a program with almost complete control over their competency sequence.

Open-exit for students, although possible, has not been utilized much beyond an occasional student testing out of one or two modules in a Cluster. The greater problem has been with students who cannot seem to get work done within the normal ten-week quarter. Many performance-based programs have been plagued with incompletes or "I" grades and at first ours was no exception. We have, however, eliminated the problem and substantially reduced the number of "Incompletes" given by increasing the structure of the program and requiring the very negligent student to re-enroll for the Cluster. No grade penalty is assessed, but there is another tuition charge.

Grades and Grading

It has frequently been said that grades are a superimposition on the learning process, but somehow students want them, registrars want them,

even employers want them. We decided early to award letter grades, but with significant differences from the traditional system. Borrowing from colleagues at Holland College, Prince Edward Island, Canada, we have established a rating scale with criterion-based standards of performance. For a top rating, a student must perform, or produce a product, that is a model of excellence. For the next level the standard is that of a typically "competent" beginning teacher. The third is loosely defined as performance that is minimally acceptable, but meets all criteria. Grades "A," "B," and "C" are assigned to the levels described. "I" grades are given to those who need additional time and encouragement to continue or complete the work, while "F" may be assigned to those judged professionally incompetent.

All evaluations are based on criterion-based checksheets found in the instructional modules or specially devised by the staff. A composite rating is computed from all modules in a cluster plus a "professional attitude" rating given by the teacher educator/resource person. It is not surprising to find that few students meet the "A" standard, most are awarded the "B" rating, and seldom has an "F" been assigned.

Faculty Assignments and Program Costs

At the three outreach centers we have been enrolling about 110 students each quarter, which generates around 400 student credit hours. Each center has the same course offerings but on different evenings. We are, in effect, delivering about 16 courses or 48 credits per quarter or term. In conventional college teaching assignments, the credit load would require about four faculty, while we are in fact generating enough student credit hours for about two positions. More by accident than by design, we have been able to deliver instruction using about two faculty positions.

By doing some time studies this quarter, we expect to generate some realistic data about faculty time requirements, especially on seminar preparation and evaluation of completed modules. From these data we hope to establish parameters for an equitable PBTE teaching assignment. There is little hope, however, that we can reduce a full teaching load below 50 students, nor is it likely that we can improve student credit hour productivity much beyond present levels. Our PBTE program has apparently neither helped nor hurt our student-credit-hour productivity. What it has done is to make it possible to deliver the right course to a vocational teacher, at a time when it is needed, and in the place where it counts--the classroom.

PBTE Project Organization and Management

In our original conceptualization, we established three distinct management groups: (1) a UCF PBTE Steering Committee, (2) a Service Area Advisory Council, and (3) a Field Contact Team. The PBTE Steering Committee consisted of the vocational teacher educators, the PBTE project

director, the department chairman, and the associate dean of the college. Our weekly, hour-long meetings have proven to be most effective in achieving program goals, but probably more important has been the success resulting from direct involvement of the vocational staff in the decision-making process. Standard operating procedures include a prepared agenda, minutes of proceedings, and a general agreement among members that presentations are best when made in writing. We seldom make a decision on any important topic before a committee member develops a position paper for the group to consider.

The Advisory Council was formulated on the idea that we would have more creditability and greater acceptance if we had input from recognized service area vocational education leaders. We selected a very representative group...vocational teachers, supervisors, local directors, administrators, even a county superintendent. After two meetings during which we outlined our program concepts and asked their advice on some relevant issues, we concluded that the council was not really necessary. It seemed apparent that the creditability and acceptance was already present, while the advice we were seeking was readily available from less complicated approaches.

The Field Contact Team is visualized as including key vocational personnel in local education agencies...perhaps county supervisors, assistant center directors, or department chairpersons. They are the field resource person cadre, communication contacts, and a source for feedback information. It is not meant to be a formal structure but rather a network of LEA assistance with representation from every "user" of vocational teacher education. The field contacts are absolutely essential to our program. Acting as Resource Persons, LEA program leaders not only participate in teacher education but they also have an opportunity to observe the development of their new teachers.

We have personally visited each service area county superintendent and his vocational administrative staff to gain support and cooperation for our program. One of our selling points has been an agreement to adjust our proposed list of teacher competencies to meet the unique needs of local school systems. Interestingly, no county has requested this adjustment; in fact, one has changed its annual faculty evaluation statement to coincide with our competency list.

Two Challenges for Teacher Educators

It was not until the early 1970's when vocational thinking and research was focused on the competency approach, and later with the development of very scientifically produced instructional materials called modules, that a different approach to vocational teacher certification became feasible. With the knowledge and comfort that substantial work had already been done, the UCF faculty chose to risk a new program approach to vocational teacher certification. True Confessions, too, would have us reveal that personnel in the Florida Division of Vocational

Education were taking strong public stands for a competency-based approach to teacher preparation. Perhaps even of greater significance, and certainly alarming, was a revolt in the larger Florida school districts, three of which had devised their own state-approved non-credit teacher training programs. Teacher educators could envision several problems from this development--one being unemployment!

In a proposal to the Division of Vocational Education two challenges were cited. One was a plea for funds. Our university, like all others, operates on a student credit hour basis. All faculty employed must produce credits. Non-producing faculty and low-productive programs are generally unaffordable. It was clear that the time and effort needed to design and develop a complete PBTE program could not be drawn from the time of regular faculty under full production. We asked for help from the Florida Director of Vocational Education, Mr. Joe Mills, and we got it.

Challenge number two was recognition of the need for cooperation and support from several sources. Implied in a performance-based approach to teacher training is an "observation-on-the-job" element. Such a field-based program could only be implemented by the University through the full consent and cooperation of our adjacent county school systems. Procedural rules, obligations, and requirements had to be identified and cooperatively resolved. But then, procedural rules existed within the College of Education, in Academic Affairs, and in the Registrar's Office as well. Further, the Office of Teacher Certification and other state agencies also required special attention. Carefully laid plans with everyone involved have helped us not only gain just acceptance to a new approach, but also receive enthusiastic support.

Anyone wishing to begin a PBTE program would be well advised to think through these two challenges very carefully before any measures are taken to start out on such an endeavor.

THE IMPACT OF PERFORMANCE-BASED VOCATIONAL TEACHER EDUCATION

Kay A. Adams

The National Center for Research in Vocational Education
The Ohio State University
Columbus, Ohio

The Impact of Performance-Based Teacher Education Curriculum

The National Center's Performance-Based Teacher Education (PBTE) curriculum has been widely adopted and has had marked impact on vocational teacher education programs. Many PBTE programs have been implemented using the National Center's 100 modules and support documents. In January 1980, two exemplary sites using PBTE, Temple University in Philadelphia, Pennsylvania and the University of Central Florida in Orlando, Florida were studied in-depth. Additional data were collected through conducting telephone interviews and surveys covering 71 PBTE programs and examining product distribution records.

Distribution

From March 1977 through January 1980, over 260,000 PBTE modules have been distributed, constituting over half a million dollars in sales. Over 1,350 different agencies and 250 individuals have purchased modules including approximately 990 education agencies, and 140 international agencies. The primary purchasers have been colleges and universities which represent 59 percent of the total dollar sales. Over 18 percent of all higher education institutions in the United States have purchased PBTE. All 50 states, 5 U.S. territories, 11 Canadian provinces, and 24 other foreign countries have purchased modules. Based on enrollment data from 29 educational agencies, an average of 60 teachers are enrolled per PBTE program on a yearly basis. Since 990 educational agencies have purchased PBTE modules, a rough estimate of 59,000 vocational education teachers have used PBTE modules.

Use

Full scale implementation as well as creative adaptations of PBTE are occurring at many agencies across the nation. Of the 990 educational agencies which have purchased PBTE modules, 360 are universities, 330 are secondary schools, 210 are postsecondary institutions, and 90 are state agencies. At colleges and universities, PBTE is used for preservice and inservice vocational teacher education programs. PBTE is being used to train teachers in agricultural education, business and office education, distributive education, health education, home economics education, industrial arts, technical education, and trade and industrial education. At secondary schools, PBTE modules are used for inservice programs for practicing teachers. At postsecondary institutions, there is an increasing use of the PBTE modules for staff development programs, most frequently as part of a comprehensive personnel evaluation and development system. In addition to education agencies, over 220 noneducation agencies such as Caterpillar Tractor Company, IBM, and Union Carbide are using the PBTE modules, most frequently as part of company training programs for improving instructional techniques.

Effects

Three levels of effects of PBTE were investigated: (1) effects on vocational teacher education programs; (2) effects on vocational teachers; and (3) effects on vocational education classrooms and students.

Effects on Teacher Education Programs

Based on in-depth interviews with 45 college and university administrators and faculty, it was found that PBTE has precipitated significant changes in many vocational teacher education program. In a period of declining need for secondary teachers, the National Center's PBTE curricula has helped university vocational education departments survive crises of funding cutbacks and faculty retrenchment. Because PBTE lends itself to an individualized approach, universities can provide field-based programs to larger service areas. PBTE made it possible for universities to attract community support, receive state funds for PBTE program development, and maintain enrollment. PBTE has (1) increased students' access to vocational teacher certification by providing self-contained instruction especially useful in rural and isolated areas; (2) increased flexibility in getting help to new teachers immediately whenever they are hired; (3) increased productivity of teacher education programs at some institutions by shortening the time required to certify vocational teachers and lowering costs by using differentiated staffing; (4) reduced variability and increased accountability of vocational teacher education curricula through standardizing the skills vocational teachers are required to master; and, (5) significantly changed the role of the university teacher from a classroom lecturer to a learning facilitator frequently working with students on a one-to-one basis.

Effects on Teachers

Based on in-depth interviews with 40 vocational education teachers and local school administrators, there is evidence that PBTE is having long-term impact on improving the caliber of vocational education teachers especially in the areas of instructional planning, organizing instruction, student reinforcement, individualizing instruction, and student evaluation. There is also evidence that PBTE increases teachers' ability to be self-evaluative and their confidence in themselves as teachers.

Effects on Classrooms and Students

PBTE also has contributed directly to vocational education classrooms. In an era of increased emphasis on basic skills and competencies, PBTE has added impetus to the movement toward competency-based instruction for all vocational education students. As one administrator noted, "If you're going to do competency-based instruction with students, you must get teachers

committed first." PBTE has (1) increased the use of competency-based techniques with students because teachers teach the way they are taught, and (2) improved the performance of local school administrators in evaluating teachers.

Appraisal

In the course of interviews with program staff, teacher educators, teachers, and local administrators, respondents were given the opportunity to assess the strengths and weaknesses of the PBTE materials. The most common reaction to the PBTE materials is a healthy respect for the technical quality of the modules themselves and the rigorous process that was used for their development. The strengths identified by various users were that PBTE materials are self-contained, modularized, performance-based, individualized, and promote accountability.

As expected, some people like the curricula materials more than others, as no materials are applicable to everyone. However, it is important to note that some of the criticisms directed at the modules are really criticisms of the concept of performance-based teacher education. With this caveat, some weaknesses identified by various users are that PBTE reduces individuality, has limited emphasis on the affective domain, and has the potential for misuse.

As a whole respondents felt that the strengths of the PBTE modules far outweighed any weaknesses.

Conclusions

The following conclusions can be drawn about the distribution, use, and effects of the PBTE curricula; (1) it is the most widely distributed product ever developed by the National Center for Research in Vocational Education, (2) it is being used by more institutions than other product developed by the National Center for Research in Vocational Education, (3) it has had significant impact on vocational teacher education, (4) it appears to be having a long-term impact on improving the caliber of vocational education teachers, and (5) it is providing impetus to the movement toward competency-based instruction for all vocational education students.

DEVELOPMENT OF PERFORMANCE-BASED TEACHER EDUCATION MODULES FOR NONDISCRIMINATORY INSTRUCTION

James B. Hamilton
Lois G. Harrington

The National Center for Research in Vocational Education
The Ohio State University
Columbus, Ohio

Development of Performance-Based Teacher Education Modules for Nondiscriminatory Instruction

Background

Staff on the performance-based teacher education module series project at the National Center for Research in Vocational Education first became interested in the competencies needed by vocational educators in order to work with students with special needs during the development of the 100 PBTE modules based on the 384 competencies identified by Cotrell et al. Late in the module development process, staff realized that some of the 384 competencies were becoming outdated, that events over the past ten years had changed the role of the vocational teacher, and that at least two areas of competencies were missing from the original list: those competencies dealing with serving students with special needs, and those dealing with the development and implementation of competency-based instructional programs at the secondary and post-secondary levels.

This past year, as one of the studies designated by the U.S. Office of Education, the National Center for Research in Vocational Education initiated the project, "Development of Performance-Based Teacher Education Modules to Impact on Training Vocational Educators in Nondiscriminatory Practices." The purpose of this three-year project is to develop training packages (modules) designed to enable vocational teachers to create learning environments that are accessible, accommodating, and equitable, in order to meet the instructional needs of individuals in those groups previously denied equal educational opportunities, such as--

- persons with limited English proficiency
- racial/ethnic minorities
- urban/rural economically disadvantaged
- gifted and talented
- mentally retarded
- sensory and physically impaired
- persons enrolled in programs nontraditional for their sex
- adults requiring retraining (displaced homemakers, aged, technologically displaced, mid-life career changers, ex-offenders)

Scope of the Project

The overall project scope of work was divided into three major task areas:

Task I - Specifications for development and revision of PBTE modules for nondiscriminatory instruction

Task II - Development, testing, and refinement of new PBTE modules

Task III - Revision and refinement of the existing series of 100 PBTE modules

During the first year, project work focused upon Task I and accomplishment of the following four major objectives:

- to identify the competencies needed by vocational teachers to assure nondiscriminatory practices in their instruction
- to develop specifications for approximately 15 new modules designed to deliver on the identified competencies
- to select, for development during years two and three of the project, those modules which would help teachers make the most impact across groups traditionally discriminated against
- to develop specifications for appropriate revision of existing PBTE modules to incorporate competencies for nondiscriminatory practices at the awareness level

The Research Process

During the past year, a complete literature search was conducted to identify prior related studies. The search was conducted through computer-access to the Lockheed Information System, using the ERIC and Council for Exceptional Children data bases among others. A number of competency-identification studies were located and reviewed. In addition, other projects were identified which included implied competencies within their findings.

In general, what staff discovered through the literature searches was the following:

- Prior to 1975, there was little in the literature related to the training of vocational teachers to deal with special populations. What existed was training of (1) special education teachers to incorporate vocational (or prevocational) training into their special education programs, or (2) special coordinators to work with vocational education personnel who had students with special needs in their classes.
- Prior to 1975, there was little interest in competency identification in this area.

- In 1975 and subsequently, there was a proliferation of competency-identification studies in the area of special needs, mostly in terms of vocational teachers who would be teaching separate classes for special students.

- Only recently have studies addressed the needs of the vocational teacher with special students mainstreamed into the regular vocational classroom. This can be attributed to recent legislation concerning the provision of the least restrictive enviornment for students with special needs.

- The term "special needs student" has generally referred only to the handicapped, the disadvantaged, and the mentally retarded.

- Most competency identification efforts have been conducted at a state level, for a specific special needs group (e.g., the educable mentally retarded). Most competency lists have been adapted from previously existing lists (e.g., Cotrell et al., 1971), and many dealt with the total role of the vocational teacher rather than with the specific competencies needed for dealing with special populations.

Based upon our review and synthesis of the teacher competency literature, several problems were revealed regarding the current "state of the art" in teacher competency identification:

- Competencies do not encompass those needed to serve all of the special needs groups who are showing up in regular vocational classes--adults returning for retraining (displaced homemakers, technologically displaced, mid-life career changers, ex-offenders), students enrolled in programs nontraditional for their sex, the gifted and talented, and students with limited English proficiency.

- Many of the competencies identified thus far lack the specificity needed to give direction to teacher training or for the development of teacher training materials.

- There appears to be a rather high level of duplication of competencies across the various competency listings, regardless of which special population is being addressed.

Based upon these observations regarding the state of the art in vocational teacher competency studies for special needs students, listing a series of recommendations may be somewhat redundant at this point. Rather, we will briefly describe approaches and courses of action being pursued by our staff which embody the recommendations which we would make at this time. (Other ongoing projects may also be utilizing similar approaches.)

For the purposes of the current work of the National Center in developing modules to train vocational teachers to provide vocational education programs that are equally accessible, accommodating, and fair to all groups of students--nondiscriminatory practice--it was necessary to go beyond the efforts made in the studies identified in the literature. For one thing, much of the information in the literature indicated that one of the most powerful elements working against the successful accommodation of students with special needs into vocational classes was the teacher's fear of the unknown. Vocational teachers, many of whom were perfectly adept at individualizing instruction and working effectively with a wide range of student abilities, were apprehensive about their ability to work with the handicapped, the mentally retarded, etc., because of their perception that they lacked the special training necessary to do so.

Consequently, we decided not to develop modules geared to different special needs groups (e.g., "Provide Vocational Training for the Handicapped"). Such an approach implies that the vocational teacher is expected to become a special educator, a specialist in the area of the handicapped...the mentally retarded...the emotionally disturbed. Instead, we decided to capitalize on the strengths and interests and skills of the vocational teacher, and to provide modules targeted to skill areas (e.g., "Identify and Diagnose the Special Needs of Students in Your Classroom"). Such an approach is designed to cut across special needs areas. In other words, instead of worrying about becoming a specialist, the vocational teacher is learning to use skills which are generalizable across special needs areas, and which apply equally well to students with "normal" capabilities. Instead of attempting to categorize the students in his/her class, the vocational teacher is learning to apply techniques appropriate to all students, including those with special needs. It was hoped that this approach would be far more useful and anxiety-free.

Second, due to recent pressures from the legislation and the lobbying of special groups, we decided to broaden the definition of "special needs" to include most of the groups with different needs which could today be found in the regular vocational classroom. After much consideration, the following groups were selected:

- Mentally Retarded
- Sensory and Physically Impaired
- Gifted and Talented
- Rural and Urban Economically Disadvantaged
- Persons with Limited English Proficiency
- Racial/Ethnic Minorities
- Persons Enrolled in Programs Nontraditional for Their Sex
- Adults Requiring Retraining

Identification of Competencies

The next step was to identify teacher competencies. The competency-identification process to be used differed from that used by the studies reported in the literature, specifically--

- The competencies would describe the skills needed by the vocational teacher to accommodate students with special needs in the regular vocational classroom--mainstreamed rather than separated out into special vocational classes.

- The competencies would be identified from a national, rather than state, perspective.

- The total role of the vocational teacher would not be addressed. Instead, the focus would be on only that which the teacher would need to do differently or more in order to accommodate students with special needs. In other words, given our 100 PBTE modules, what additional skills are needed, and which of those 100 skills are of especial importance in working with students with special needs?

- For the purposes of module development, the competencies would be delineated at a very detailed level of specificity.

- Since we are concerned with the skills that are common across special needs groups, as well as those that are unique, the competency-identification process was structured to (1) identify the teacher skills needed for each special needs group, and then to use that information to (2) identify the teacher skills common and unique across special needs groups.

- Instead of adapting previously established competencies, the DACUM process was used to identify competencies from scratch.

The DACUM (Developing A Curriculum) process is a modified brainstorming process used with small groups of expert practitioners to analyze an occupational area and reach consensus on the skills needed. In this case, it was used as follows. For each of the eight special needs groups identified, a DACUM panel was formed. Thus, for example, the panel for the mentally retarded was comprised of eight persons, some of whom were vocational teachers with expertise in working with the mentally retarded and some of whom were supervisors or teacher educators with expertise in the needs of the present as well as a grasp of the ideal skills of the future.

Each of the eight panels met separately in the spring of 1979, and each spent two full days analyzing the role of the teacher in serving

the special needs group they represented. First, each group specified the broad competency areas needed (e.g., "Instructional Planning"), and then, for each broad area, the group specified the competencies required (e.g., "Develop an IEP"). Since DACUM is a consensus process, as each competency was suggested, it was vigorously discussed, dissected, and debated. When a competency--and the preferred phrasing of that competency--was finally written on a card and placed on the wall, it had the support of the whole group.

After all eight DACUM panels had met, staff looked across all eight lists at the broad competency areas specified. Basically, each group had come up with the same broad areas, although each broke them out in a slightly different way. Staff then specified their own broad competency areas, consistent with those of the panels, but allowing for the different lists to be considered together. The competencies from each list were then combined under the appropriate broad areas.

One member from each of the DACUM panels was then selected to participate on a commonalities panel. This panel met to review the combined list. The panel considered the competencies under each broad competency area, looking for overlap and repetition. Similar items were combined. Unclear items were clarified and restated. Poorly worded statements were refined. This panel met for two days and, based on the direction they provided, staff continued the effort. The result was a single list of competencies needed by vocational teachers working with students with special needs.

At this point, the competency list was compared to other existing lists to determine if any critical competencies had been overlooked. Approximately 25 lists of stated or implied competencies located in the literature were reviewed, competency by competency, to ensure that each competency was included in our list of competencies. Only six competencies were discovered that (1) were not on our list in any form, and (2) seemed substantially important. These were added to our list.

In addition, another project at the National Center had been completed, the objective of which had been to develop a list of educational strategies that may be employed by vocational practitioners to meet the needs of disadvantaged, handicapped, and limited-English-proficiency students. The list of strategies had been derived from visits to model programs and reviews of the literature. Each of their 161 strategies (or competencies), except two, were somehow covered in our list of competencies. Those two unique competencies were added to our list, making a total of 384 competencies.

An instrument was then developed using this list of 384 competencies. For each of the original eight special needs groups, a verification panel of ten persons (vocational teachers, supervisors, teacher educators) was selected. Each group of ten persons had expertise in the skills needed by vocational teachers to work with a single specific special needs group in the regular vocational classroom. The instrument was sent to each of

these 80 persons. Their task was to review each competency on the list and to rate each competency according to its importance (of little or no importance, important, very important) to the vocational teacher of the special needs group they represented (e.g., mentally retarded).

Thus, for each special needs group, ten persons verified the importance of the competencies for teachers of their special needs group. The data for each of the eight groups were summarized (mean, mode) and synthesized onto a single chart of competencies. Thus, for any one competency, one could look across the chart and see the mean/mode for each of eight groups. It was immediately evident which competencies were important across all areas and which were unique to specific groups only.

The verification panelists also provided a ranking of the importance of the 16 broad competency areas. They were asked to select the four most important areas and rank them "1"; the next four most important and rank them "2"; the third most important and rank them "3"; and the fourth most important and rank them "4." These rankings were totalled within each group, and ranked accordingly. They were then totalled across all groups to provide the final overall rankings.

Currently, the data synthesis is being used to determine the instructional modules needed and the order in which the modules will be developed. As presently conceived, 15 modules will be developed. The topics of those 15 modules are as follows (the topics are listed in the order of their importance as ranked by the verification panels):

- Instructional Planning
- Preparation of Students for Employability
- Materials Selection/Development
- Special Instructional Techniques
- Counseling/Student Self-Awareness, Self-Concept, Self-Image, Self-Actualization
- Identification/Diagnosis of Students
- Communication/Language/Vocabulary
- Development of Students' Career Planning Skills
- Student Evaluation
- Program Evaluation
- Professional Development
- Development of Students' Life-Role Competencies
- Modification of Learning Environment/Physical Setting
- Promotion of Peer Acceptance
- Program Promotion

As you can probably see from the module topics, with the exception of the module on the modification of learning environment/physical setting--which is specifically geared to the sensory and physically impaired--each module covers a skill which has applicability across special needs (and "normal") groups.

Development of the set of 15 new nondiscriminatory practices modules is being initiated on an incremental basis with field testing, revision, and publication to follow.

In the process of identifying the competencies for nondiscriminatory practices, it was found that many vocational educators believe that vocational programs designed as individualized competency-based programs hold the greatest promise for assuring equal accessibility, accommodation, and fairness to all students. The current edition of the PBTE module series includes neither the requisite teacher competencies nor reference to installing and conducting competency-based instruction (CBI) in vocational programs.

Concurrent with module development this year, a list of competencies--previously identified as being essential for vocational teachers to install and conduct competency-based instruction--will be verified. Specifications will then be developed for the inclusion of appropriate CBI competencies in the revision of the series of 100 PBTE modules.

Incorporation of appropriate CBI competencies into the PBTE module series at the same time as revision of the modules for nondiscriminatory practices will contribute in two ways: (1) effectiveness of the materials in preparing teachers to provide nondiscriminatory instruction will be enhanced, and (2) a second costly revision process will be avoided; thus this approach is more cost-effective.

The major objectives of the designated study during 1980 are:

- to develop new prototypic nondiscriminatory practices modules (15-20) designed to deliver on the nondiscriminatory practices competencies as per specifications developed previously
- to initiate field testing of the nondiscriminatory practices modules
- to conduct verification of the CBI competencies identified through previous National Center research
- to develop further specifications for refinement of the existing PBTE modules series to incorporate, as appropriate, CBI competencies at the awareness or skill level
- to initiate revision of the existing PBTE module series, as per specifications, to incorporate competencies for nondiscriminatory practices and for CBI at the awareness or skill level
- to initiate pilot testing of a sample of revised modules from the PBTE module series

- to formalize agreements for publication and marketing of the nondiscriminatory practices modules and the revised PBTE module series
- to develop specifications for new modules (10-12) designed to deliver on the verified CBI competencies

DEVELOPMENT OF PROFESSIONAL MATERIALS FOR THE PREPARATION OF LOCAL ADMINISTRATORS OF VOCATIONAL EDUCATION

Robert E. Norton

The National Center for Research in Vocational Education
The Ohio State University
Columbus, Ohio

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Development of Professional Materials for the Preparation of Local Administrators of Vocational Education

Background

The need for increasing numbers of competent administrators of vocational education at both the secondary and postsecondary levels continues. It is no secret that the operation of high quality vocational education programs requires leaders who possess many complex and unique management skills. Many states have established the preservice and inservice training of their local administrators of vocational education as one of their top priorities for personnel development. Unfortunately, the effective training of these administrators has been hampered by the limited knowledge of the competencies needed and by the limited availability of competency-based materials designed to help deliver the important competencies.

In response to this recognized need, the National Center for Research in Vocational Education, with USOE sponsorship, launched a two-year research and development effort in 1975 entitled "Development of Competency-Based Instructional Materials for Local Administrators of Vocational Education." The project had two major objectives as follows:

1. To conduct research to identify and nationally verify the competencies considered important to local administrators of vocational education.

2. To develop and field test a series of prototypic competency-based instructional packages and a user's guide.

The identification of competencies was based upon input from a select group of experienced vocational administrators participating in a DACUM (Developing A Curriculum) workshop and on the results of an extensive and comprehensive literature search and review. The merger of the DACUM and literature review task statements resulted in a list of 191 task statements that described all known functions and responsibilities of secondary and postsecondary vocational administrators. These task statements were submitted by questionnaire for verification to a select national group of 130 experienced secondary and postsecondary administrators of vocational education. Ninety-two percent (92%) of these administrators responded to the verification questionnaire and indicated that 166 of the 191 statements were competencies important (median score of 3.0 or higher) to the job of vocational administrator.*

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*For more information about these competencies, see The Identification and National Verification of Competencies Important to Secondary and Postsecondary Administrators of Vocational Education by Robert E. Norton, Kristy L. Ross, Gonzalo Garcia, and Barry Hobart, Columbus, OH: The Center for Vocational Education, The Ohio State University, 1977.

The development objective of the project led to the tentative clustering of the verified competencies into 30 groups for materials development purposes, and to the development and field testing of six prototypic modules and a user's guide. The original six modules, which are now available from the National Center Publications are:

Organize and Work with a Local Vocational Education Advisory Council
Supervise Vocational Education Personnel
Appraise the Personnel Development Needs of Vocational Teachers
Establish a Student Placement Service and Coordinate Follow-up Studies
Develop Local Plans for Vocational Education (Part I)
Develop Local Plans for Vocational Education (Part II)

The modules were well received by the administrator trainees and the resource persons who utilized them. Some of the strongest support for the materials came from persons in states which are moving (some, very rapidly) toward competency- or performance-based professional development programs for vocational teachers and administrators. To deliver on all of the important competencies verified, additional financial support was needed to develop the remaining modules. Federal support was sought but was unavailable for developmental purposes. The National Center was encouraged, instead, to seek the involvement of interested state departments of education for financial sponsorship of further development.

Consortium Organized

After much recruitment work, the National Center for Research in Vocational Education and seven interested states organized a Consortium for the Development of Professional Materials for Vocational Education. Beginning on September 1, 1978 the Consortium members combined their efforts to support the cooperative development, field testing, and implementation of competency-based materials for professional vocational educators.

Initial efforts during 1978-79 were focused upon the development of competency-based administrator modules, using as a research base the 166 competencies identified and nationally verified as important to local administrators in previous USOE-supported National Center research. To deliver on all the important competencies verified, it was estimated that 25 to 30 modules were needed. With six modules having been developed and field tested as part of the original USOE project, the Consortium undertook the development of the additional modules needed at the rate of one module per member state per year.

While their membership became effective at different times during the year, seven states eventually became members during the 1978-79 year. The sponsoring state agencies and/or cooperating educational institutions

were as follows:

1. Florida Department of Education and Florida International University
2. Illinois Office of Education and Southern Illinois University at Carbondale
3. Ohio Department of Education
4. New York State Education Department
5. North Carolina Department of Public Instruction
6. Commonwealth of Pennsylvania and Temple University
7. Texas Education Agency

Consortium Operation

The Consortium operates through its Board of Members with each member state being entitled to one voting representative. The scope of work of the Consortium is carried out primarily by staff employed at the National Center for Research in Vocational Education, with the help of consultants who are employed as either writers or module reviewers to help with the development process.

A brief explanation of several operational procedures will serve to explain how the Consortium functions:

1. Each member state has one vote on the Board of Members which is the legal policy-making body of the Consortium.
2. The Consortium Board meets twice a year, usually in September and March.
3. Consortium members participate in determining module priorities and field-testing procedures.
4. Consortium members nominate consultant writers and reviewers, and participate in field testing.
5. Consortium members have equal and immediate access to all of the materials developed.

Development Procedures

The procedure used in developing and field testing the administrator modules can best be described as a cooperative development process.

In one of the first steps, the member states vote to establish the priority competencies for module development. Once the development priorities are established, the state representatives are asked to nominate qualified persons who can assist National Center staff as either consultant module writers or module reviewers. The nominees plus selected others known to the National Center Consortium staff are contacted and asked to apply for the job of consultant writer or reviewer on one or more of the modules to be developed. From these applications, Consortium staff select the most qualified persons available.

A four-stage development process is begun at that point to prepare the modules. The four-stage sequence of development includes (1) preparation of a module prospectus, (2) preparation of a field-review version, (3) preparation of a field-test version, and (4) preparation of the published edition. A brief description of the procedures used at each stage of development follows.

Preparation of the module prospectus.--The module prospectus is usually a four- to eight-page outline of the proposed module. It contains statements of the terminal and enabling objectives, an outline of the topics to be covered in the information sheets, the proposed learning activities and feedback, a tentative list of the performance assessment criteria, and a list of the specific competency statements to be addressed by the module. The prospectus is generally drafted by the Consortium staff member assigned to the module after he or she has analyzed the competencies to be covered and reviewed the available literature. The prospectus is further developed and refined, however, at a one-day conceptualization meeting involving the consultant writers and Consortium staff. Three copies of the refined prospectus are submitted to each state representative for reviews and critiques by the persons they designate. A twenty-day turnaround time is requested so that the module writers can benefit from the critiques received as they prepare the field-review version.

Preparation of the field-review version.--After the conceptualization meeting, the two consultant writers are asked to immediately begin the preparation of information sheets, case studies, model answers, etc., based on their actual knowledge, experience, and expertise in the particular area. At the same time, the National Center staff writer continues the search for relevant literature and sample materials. The staff writer maintains contact with the consultant writers to answer questions, check on progress, and relay information received from the prospectus critiques. Once materials are received from the two consultants, the staff writer prepares the field-review version by merging, rewriting, editing, and formatting the material into a full-blown draft of the module. It is then reviewed internally by another Consortium staff member before duplication of the field-review copies. Six copies of the field-review version of the module are sent either to the state representative or directly to the persons previously designated for voluntary reviews in each state. A module reviewer's checklist and directions for completing the reviews accompany each module. At the

same time, three paid consultant reviewers are also asked to provide a detailed review and written critique of the module. Again, a twenty-day review period is utilized so that the reviewers' comments can be obtained as quickly as possible and used in preparing the field-test version.

Preparation of the field-test version.--All the field-review module checklists and the written suggestions received are summarized and analyzed as the major input into development of the field-test version of the module. Commonly, two or three Consortium staff members review the comments and suggestions for improvement and decide on changes to be made by the staff writer. When necessary, another consultant may be employed or further work may be requested of one or both of the initial consultants to supply needed material. Once the field-test version has been prepared, it is again reviewed internally by another Consortium staff member before duplication for field test purposes. Each member state and/or cooperative institution of higher education receives 30 copies of each module for field testing. In addition to the modules, field-test quidelines and instruments are provided for use by both the resource persons and administrator trainees. In most states, an orientation and training session has also been conducted to prepare resource persons for their role in field testing.

Preparation of the published edition.--Although this stage of development has not yet been reached, plans call for the summarization and analysis of field-test data from all states as a basis for preparation of the published version of each module by the Consortium staff. It is anticipated that data will be collected from at least five different states and a minimum of fifty administrator trainees before revision is begun. Once published, 30 copies of the module will be supplied to each member state, and additional copies will be available through regular National Center publications channels.

Nature of Modules

Each module covers a single broad competency or skill area (usually encompassing two or more related subtasks) needed by local administrators to carry out their responsibilities effectively. Through a variety of learning activities, learners obtain background information concerning the skill covered, apply that information in practice or simulated situations, and eventually demonstrate the competency in an actual administrative situation. During the final learning experience, the administrator's performance is assessed by a resource person using a checklist of specific performance criteria.

The modules can be used in preservice or inservice workshops, graduate courses at universities, internship or externship leadership development programs, and other programs. While the modules are designed for individual use, permit self-pacing, and require few outside resources, they are not self-instructional. Preferably, they should be used under the guidance of a qualified resource person who can advise

learners and evaluate their progress. This might be a university professor, a state department of education supervisor, or an administrator at the state, regional, or local level.

The funds from an individual state support the development and field testing of one module but, by participating in the Consortium, each member state has immediate and equal access to all the modules being developed. During the first year the following seven modules were developed:

Direct Curriculum Development
Guide the Development and Improvement of Instruction
Provide a Staff Development Program
Direct Program Evaluation
Promote the Vocational Education Program
Manage Student Recruitment and Admissions
Involve the Community in Vocational Education

During 1979-80, the same states are supporting the development of the following seven modules:

Evaluate Staff Performance
Select School Personnel
Coordinate Guidance and Administrative Services for Students
Prepare Vocational Education Budgets
Manage the Purchase of Equipment, Supplies, and Insurance
Obtain Financial Support
Manage Physical Facilities

Summary and Conclusions

The viability of the cooperative development approach as a cost-effective procedure for developing and field testing high quality professional materials that meet the identified needs of several states has been successfully demonstrated through the Consortium's first year of operation. Perhaps the best measure of the Consortium's success is indicated by the intent of all member states to continue their financial support and participation in the Consortium for a second year.

The formation and operation of the multi-state Consortium has led to the following recognized advantages over individual state efforts:

1. Member states can effectively pool limited financial resources for curriculum development purposes. The cooperative approach permits major savings as compared to the cost of individual state efforts, if such efforts are possible at all.

2. Member states can effectively pool the professional expertise needed to develop, critique, revise, field test, and publish high quality materials addressing many different competencies.

3. Through cooperative development, member states can avoid the unnecessary duplication of effort and enhance the quality of the materials developed.

Further information on the Consortium can be obtained from Dr. Robert E. Norton, Consortium Program Director, at the National Center for Research in Vocational Education, The Ohio State University.

THE RESOURCE PERSON
IN
PERFORMANCE-BASED STAFF DEVELOPMENT

James G. Pollard

Spokane Community College
Spokane, Washington

The Resource Person
in
Performanced-Based Staff Development

The National Center's development of the Resource Person role should, in time, be recognized as classic work of mastery. Crossing barriers of traditional education, staff developers will be free to meet the individual needs of each instructor with whom they work. Freeing the Resource Person from instructional delivery is not a solution in itself, but it does represent a series of opportunities to the entire educational community in general, and to the staff developer in particular.

Those of us familiar with the National Center's Resource Person role well know that the instructional activities coordinated by the Resource Person are a combination of individual conferences, small group activities, large group activities, phone conferences, site visits, media instruction, and peer interaction, among other things.

Let me share some deeper perceptions of this new breed of teacher educator with you.

Resource Person - An Instructional Diagnostician

An effective Resource Person assists instructors in diagnosing instructional problems. Sensitivity to all types of delivery systems and modes is imperative. Symptoms of instructional difficulties are reflected in such things as student learning problems, motivation, attendance, and attitude. Other symptoms may show themselves in the instructor's frustrations, personal problems, and lack of teaching skills. The course itself may show signs of outdated material or inappropriate subject matter. Delivery systems and instructional strategies may need adjustment or revision. To be an effective instructional diagnostician, the Resource Person must be in tune with the entire instructional climate.

Resource Person - An Instructional Prescriber

Once the diagnosis is made, the Resource Person must stand ready to prescribe an effective correctional activity for each instructional deficiency identified. Often it is not enough for the Resource Person to understand what corrective measures may be necessary, but he/she must assist the instructor in discovering his/her own problems, and personally deciding on the necessary steps for improvement.

Resource Person - A Positive Instructional Prognosticator

Proponents of the "Pygmalion Effect" have conceptualized the characteristics of the positive instructional prognosticator. Always supportive of improvement activities, Resource Persons assist their clients in seeing themselves as successful. The effective Resource Person expects success, but at the same time, points out the useful aspects of efforts which fall short of the goal. The Resource Person is a master of "Expectations of Success." Improvement activities which develop new instructional skills are never ends in themselves, but are a means for making possible a more effective or satisfying learning experience for students.

Resource Persons - Keeping in Step

The direction seems clear...movement toward more individualized teacher training activities is evident. In order to keep pace with this trend, staff developers must increase the variety of their tools in order to effectively manage individual instructional assessment, different learning preferences, individual concerns about innovation, and free-style course development.

Learning Preferences

The Canfield Learning Style Inventory and the Hill Model of Cognitive Mapping are only two of several systems which will assist the staff developer to take advantage of the individual learning preferences of instructors with whom they work. Self-paced styles of education have placed more of the burden of learning on the learner. To be effective, we as Resource Persons must pay more attention to assisting the learner in how to learn. Cognitive Mapping provides learners with insights into their learning styles which most individuals have never before perceived. Assisting individuals in identifying their learning preferences seems to be a logical starting point for self-paced delivery systems.

Individual Concerns about Innovations

The Concerns-Based Adoption Model is a system developed by Gene Hall at the Research and Development Center for Teacher Education at the University of Texas at Austin. It is an example of how Resource Persons can effectively select developmental materials based on an individual readiness. Long overdue are the results of efforts by the National Institute for Staff and Organizational Development-North American Consortium, to present staff development materials written at seven different levels of concern. Coded for easy dissemination to faculty members specifically ready for a specific topic, these materials will surely enhance any staff development program.

The unique, individual needs of instructors (learners) must first be identified. As Resource Persons verify these needs they (the instructor and the Resource Person together) must identify performance objectives and learning activities which when met, will provide the instructor with the skills necessary to meet his or her needs.

Free-Style Course Development

The challenge of open-entry enrollment must be met so that instructors (learners) involved in free-style education courses can begin their work on any day, and can complete their program any time they have achieved their objectives. This challenge has been met at Spokane Community College. Free-style PBTE courses are being offered at Spokane, and the results are encouraging.

Once limited to traditional classroom staff development courses, the program has been opened up and enlarged, and is presently offering a wide range of individually designed teacher education courses. A first aid instructor is enrolled in a course called "The Development of Competency-Based First Aid," and a Psychology instructor is working through a course titled "Group Activities in Psychology 101." A Secretarial Science instructor is completing a course on "Developing Aerobics for Secretaries." Spokane Community College presently has 37 instructors enrolled in its Free-Style PBTE courses, each specially designed by a Resource Person and the individual taking the course.

Individualized Instructional Assessment

Spokane Community College has developed an assessment system for improvement of instruction which permits an individual instructor to select from hundreds of items in a catalog to design a personalized assessment form that will focus on any aspect of the course or the instructor's performance. It permits and encourages the use of assessment by students, peers, administrators, and community members, as well as self-assessment. In conjunction with each assessment item is a self-instructional activity designed to provide improvement activities if improvement is indicated. This assessment process forms the basis for a staff development program which consists (minimally) of an Instructional Specialist, a Staff Development Committee, and resource materials which are readily available to faculty members.

An instructor may conduct a general assessment by students one Quarter and discover certain improvement needs. The next Quarter's assessment might be done by other instructors within the department, with peer assessors offering helpful advice. In another case the instructor could work with the Instructional Specialist. In other words, we hope that the flexibility of the assessment catalog, coupled with the availability of opportunities for improvement, will make individualized instructional assessment a valuable tool in the improvement of instruction.

TEACHER CENTERING IN THE SUNSHINE: A PROFITABLE PARTNERSHIP

Rex C. Toothman

College of Education
University of South Florida
Tampa, Florida

Teacher Centering in the Sunshine:
A Profitable Partnership

What is a Teacher Center?

Teacher centers are blooming across the country this spring. Growth in the number and diversity of new centers has been startling over the past five years--and this has been especially true in the State of Florida. Teacher centers come in an endless variety of shapes and sizes, but they do seem to have a number of characteristics in common:

1. Most have a physical headquarters. (It may be just an office, or it may be a whole school.)

2. Most have an operational staff. (Maybe just one person, or it may be a good-sized group.)

3. Most are based on the idea that teachers themselves should have a major voice in how they are run.

4. Most emphasize inservice education, although some cooperate with schools of education in providing preservice training.

5. Most have greatly varied programs involving courses, workshops, speakers, and so forth, with a wide range of time involvement for participants.

What Events Are Stimulating the Growth of Teacher Centers?

The following are among the major factors in the remarkable expansion of the teacher center concept:

- A federal program which has appropriated funds for creating and supporting teacher centers on a national scale.

- Programs established by the National Education Association and the American Federation of Teachers to develop and supply teacher centers started by members of their organizations.

- Establishment of a national clearing house, The Teachers' Centers Exchange, funded by the National Institute of Education (NIE) in the Far West Regional Laboratory in San Francisco.

- In Florida, the passage of the Florida Teacher Center Act of 1973, which mandated that by July 1, 1979, each of Florida's 67 county school districts would collaborate in the development of a center.

In the Sunshine

The State of Florida has a well-earned reputation for the high percentage of days in which Ole Sol blesses us with his warmth and presence. But the word sunshine in Florida implies more than good weather. State and local governments in Florida operate under a Sunshine Law which has become a model for other states as well as the Federal government. This law requires that all meetings involving governmental agencies be open to the general public--and meetings conducted in secret have virtually been eliminated.

As applied to teacher centering, "...in the sunshine" implies that not only are meetings of governance groups open, but also that data are shared, and relationships among the collaborating groups are open and above board. Destructive game playing is minimized, and all parties involved participate in making decisions which are reflective of the best interests of all.

A Profitable Partnership

> "The teacher center should be a vehicle to facilitate the joint efforts of universities and school districts to carry out teacher education programs which assure that the teacher's point of view is always considered."
>
> Ralph D. Turlington
> Commissioner of Education
> State of Florida

Who are the partners in this venture?

1. The school districts of Florida--(all except two made the mandated deadline set by the Legislature)--who have organized 42 TEC's, six of which are multi-county, serving 65 of 67 districts. These school districts are the recipients of $5.00 per FTE for staff development, totaling approximately $7½ million.

2. The nine universities of the State University System--plus several private colleges who have signed agreements to deliver services to the teacher centers; services valued this year at $2½ million.

3. The teaching profession--who constitute a majority of membership on state and local teacher center governing councils, and have as part of their responsibility the recommending of programs and budgets for their delivery; i.e., how the $10 million will be spent.

Who Profits From These Arrangements?

Collaboration and development of self-responsibility for professional improvement are two fundamental principles in understanding the operation of Florida teacher centers. Historically, the responsibility for the preservice preparation of teachers belonged to colleges and universities, while responsibility for inservice training was assumed by the school districts. The collaborative nature of the center concept makes those restrictive lines more flexible. Both agencies and the teaching profession are involved in program development using the schools as a teaching and learning laboratory.

The second principle, development of self-responsibility for professional improvement, is most important. The teacher center must strongly emphasize the ideal of helping teachers become responsible for their own professional development. The end product of such an effort becomes the professionalization of teaching. This process is recognized as being of tremendous benefit to teachers and the school districts they serve.

And what about benefits to a College of Education? Some obvious benefits would include: providing a new lease on life...a new way to be productive; offering a new leadership role in the education mainstream; providing opportunities to try innovative approaches, particularly in program development and in curriculum construction; offering new opportunities for conducting applied research; and making it possible to develop a new repertoire of skills.

Although the three collaborating groups reap positive benefits from teacher centering, the bottom line has to be evaluated in terms of student outcomes. Massive evaluation efforts are now underway in an effort to answer the obvious question: Does the expenditure of approximately $10 million per year for the development of human resources in our public schools really pay off in terms of student progress and achievement?

In summary, teacher education centers were established by the Florida Legislature to be a cooperative venture among school districts, colleges of education, and professional organizations. Their purposes include determining the training needs of teachers, planning training activities, and delivering services that are responsive to teacher needs.

PBTE Programs Using Teacher Centers

With this information as a backdrop, I feel sure that you are already sensing that by its very nature the teacher center can be very useful in delivering performance-based teacher education to vocational teachers.

The State of Florida State Board of Education Rules authorize the development of alternative teacher education programs proposed by teacher centers through a process of program approval. I would like to share with you two such program development efforts which have been implemented

in Florida for preparing vocational teachers using the teacher center as the vehicle, and applying a performance-based approach:

- Leon County TEC Vocational Industrial Education Teacher Certification Program.
- Polk County TEC Vocational Teacher Program at Ridge Voc-Tech Center.

Both programs identified preservice and inservice competencies to be demonstrated by participants. Both also provided a means for students to validate college credit if they wished to do so. Both received some supplemental financial support from the State Department of Education.

Let me highlight briefly some distinctive characteristics of each of these programs.

Vocational Teacher Certification Program:

1. Four school districts (Leon, Gadsden, Jefferson and Wakulla) and a community college (Tallahassee) participate.
2. Two universities (Florida State and Florida A & M) are involved.
3. The TEC program is designed to fill industrial teacher vacancies for ongoing vocational programs.
4. A total of 102 teacher competencies have been identified (41 preservice and 61 inservice).
5. A strong evaluation component includes appraisal of the teacher's performance on the job over a period of years.

Polk County Vocational Teacher Program at Ridge:

1. Participants are the total faculty for a new vocational facility in a single school district (Polk County).
2. One university is involved (University of South Florida).
3. The program is designed to enhance the capability for the new faculty to deliver competency-based vocational instruction.
4. A total of 44 preservice competencies have been identified.

5. There is ongoing involvement of the Department of Education, the University of South Florida, and the Polk County Teacher Education Center to establish a site for demonstrating delivery of competency-based instruction.

6. The program calls for utilization of a total of 900 hours of university service time over a three-year period.

Florida's approach to teacher centering requires all teachers, including vocational teachers, to assume more initiative and responsibility in their professional training, although this may seem unfamiliar to them. School district administrators are being pushed to abandon their traditional duty of "giving" inservice education to teachers whether it meets teacher needs or not. University personnel, likewise, are facing their responsibility of attending to teachers and administrators as equal partners in an enterprise which up to now has been owned and operated by the university alone. Florida's new state policy for teacher education will be fully realized when teachers, administrators, and university faculty learn to cooperate with one another on an equal basis. In the end, the form of teacher education centers established in Florida may prove to be a new experiment in a very old idea...democracy.

THE CHALLENGE OF COMPETENCY-BASED VOCATIONAL INSTRUCTION: IMPLICATIONS FOR TEACHER EDUCATION

Darrell D. Heitzman

Suburban Hennepin County Vocational Technical Centers
Minneapolis, Minnesota

The Challenge of Competency-Based Vocational Instruction: Implications for Teacher Education

Suburban Hennepin County Vocational Technical Centers

Suburban Hennepin Vocational Technical Centers, Minneapolis, Minnesota, opened multi-campus facilities in 1971 designed to serve approximately 3500 vocational students at both the secondary and post-secondary levels, and Special Education students from 13 participating school districts. Currently, two campuses have been built to provide vocational education opportunities for secondary and postsecondary students. Each of these campuses contains approximately 7½ acres under a single roof, and houses approximately 65 vocational programs. There are approximately 300 vocationally certified instructors on the two campuses, serving approximately 1600 secondary students in two-hour time blocks, and approximately 3000 full-time postsecondary students.

Competency-Based Curriculum Design

For each vocational program, competencies are identified and agreed upon jointly by program staff and advisory committees that represent each individual program being offered by the district. The following steps are carried out, with little variation for each program.

1. An occupational description is developed, describing what people do in a particular occupation, and the conditions under which they work. This description also names various sub-occupations for which people can be trained.

2. Each occupation is broken down into the competencies a person performs in the occupation. A competency is a statement of what a person is able to do, and is both observable and measurable. Identified competencies are validated with the occupational advisory committee.

3. Each competency is broken apart into its respective tasks--entry-level skills which must be acquired and which are also observable and measurable.

4. Each task is detailed to determine step by step what must be done to perform the task. Each "doing" step is analyzed to identify what a person must know in order to perform each step in the task.

5. Performance objectives are written stating the degree of skill which a worker must display in performing a competency/task, based on employable levels. This level of employability is validated with the occupational advisory committee.

6. Evaluation instruments are prepared to measure the competency/task.

7. Resources and learning activities are identified to provide the basis for giving students the skills and knowledge required to enable each individual student to master the competencies and tasks required for one or more sub-occupations in the student's chosen occupational field or the general education field in which the student is working.

The term "competency-based" is utilized at Suburban Hennepin County Vocational Technical Centers to indicate the analysis procedures only. The delivery systems, therefore, may range all the way from "very traditional" to the most exotic forms of individualized instruction. Instructional materials are developed in a PAK format for delivery via individualized instruction. The format does not embrace any particular mode of instruction nor any particular media, but it does allow for self-paced learning, open entry/open exit, and receiving credit for prior learning.

Design for Implementation of the Competency-Based Vocational Program

Joint Independent School District No. 287 is committed to a system of instruction designed in individualized units which allow students to move through a program at their own pace and ability. Each program is based upon a detailed breakdown of occupational components known as competencies. These competencies form the initial input to this system and must be identified and completely analyzed before any semblance of an individualized system can be implemented.

A program is initiated by first identifying the competencies necessary for a person to find employment success in an occupation. Identified competencies are observable and measurable on the job. Therefore, it should be possible to observe a worker in industry performing any identified competency. Competencies are verified by discussing them with an advisory committee composed of both managers and actual workers in that industry. Decisions are made concerning which competencies should be taught to a person initially entering the industry. This list of competencies must be changed continually to reflect newly identified or changed demands which must be performed to maintain success in the industry.

A complete analysis of the competencies provides the input to the system upon which many decisions can be made. From the analysis, information is gathered which determines the content of the program, the evaluation of students, the resources required, and the characteristics of the program. Only after this information has been gathered can a competency-based individualized instructional system be implemented.

Developing a Competency-Based Vocational Program

In order for competency-based education to succeed, an ongoing in-service training program must be developed to train staff to: (1) write curriculum, (2) teach the competencies, and (3) follow the overall concepts of competency-based education. Generally, this is no small task. As most instructors have participated in a traditional educational process all their lives, competency-based education is most often seen as a foreign element which, at best, must be lived with and certainly not be adopted for use without proven results. Consequently, instructors must be: (1) shown what competency-based education is, (2) given reasons for its adoption along with proven success examples, (3) motivated to develop the personal skills required to write and teach competencies, (4) given an opportunity to personally experience competency-based education in action, and (5) given the time, resources, and educational guidance and assistance needed to write curriculum and teach using the process of competency-based education.

There are any number of suggestions which could be made which would be useful to those desiring to implement competency-based individualized instruction for their vocational programs. Although specific suggestions would be too numerous and lengthy to mention here, the following general areas would merit careful consideration.

- Prepare a written philosophy to be supported by all administrators and the local school board.
- Conduct workshops for all administrators on competency-based vocational education.
- Standardize the terminology to be used.
- Standardize a curriculum analysis system.
- Provide training for all personnel in the district.
- Provide staff support in all areas of development.

Looking to the Future

In this Conference presentations have been given by some of the foremost authorities on competency-based vocational teacher education in the world. You have also shared ideas with other participants representing twenty-two states and Canada. Based upon the eminence of this group and the quality of the presentations given at this conference I would like to look at the future in two ways: (1) by presenting a list of recommendations for this group, and (2) by presenting a list of developments which I believe we will see in the future regarding competency-based teacher education.

The following is a list of recommendations to which I believe this group should address themselves:

- Establish an annual National Conference on PBTE
- Develop a National Philosophy or policy statement on PBTE
- Establish a National Definition of terms for PBTE
- Establish a National Dissemination Clearing House for new developments in PBTE (Perhaps the National Center for Research in Vocational Education could fulfill this function.)

The following is a list of developments which I believe we will see in the near future in the PBTE movement:

- Competency-based personnel systems
- Competency-based property management systems
- Competency-based evaluation of staff, administrators, facilities, and equipment
- Competency-based cost effectiveness studies
- Competency-based budgeting systems
- Other management information systems at local, state and national levels

APPENDIX

CONFERENCE STAFF
AND MAJOR PRESENTERS
NATIONAL INVITATIONAL CONFERENCE ON PBTE

Orlando, Florida
March 20-21, 1980

University of Central Florida
College of Education
Box 25000
Orlando, Florida 32816

Dr. Harry O. Hall
Chairman, Department of Secondary and Vocational Education

Dr. Glen E. Fardig
Director, PBTE Project

Dr. Earl Fowler
Professor of Education

Dr. Robert F. Paugh
Assistant Professor of Education

Dr. Steven E. Sorg
Assistant Professor of Education

Mary Lou Park, R.N.
Visiting Assistant Professor

The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

Dr. James B. Hamilton
Senior Research and Development Specialist

Dr. Robert E. Norton
Senior Research and Development Specialist

Dr. Kay A. Adams
Coordinator of Center Evaluation

Ms. Karen Quinn
Program Associate

Ms. Lois G. Harrington
Program Associate

Dr. W. Robert Houston
Associate Dean
College of Education
University of Houston
Houston, Texas 77004

Mr. Darrell Heitzman
Program Coordinator
Suburban Hennepin County Voc/Tech Centers
1820 North Xenium Lane
Minneapolis, Minnesota 55441

Mr. James G. Pollard
Instructional Specialist
Staff Development
Spokane Community College
N. 1810 Greene Street
Spokane, Washington 99207

Mr. Rex Toothman
FAO 231 College of Education
University of South Florida
4202 Fowler Avenue
Tampa, Florida 33620

NATIONAL CONFERENCE ON

PERFORMANCE-BASED VOCATIONAL TEACHER EDUCATION

MARCH 20-21, 1980 Orlando, Florida

AGENDA

Thursday, March 20 - Morning Session

8:45 a.m.	Registration	
9:00 a.m.	Morning Session Begins	
	Overview of the Conference	*Glen Fardig*
	Welcome to the University of Central Florida	*President Trevor Colbourn*
	Introductions	
9:30 a.m.	PBVTE Benchmark: The UCF Program	
	The UCF Setting	*Dean C. C. Miller*
	The UCF Program Model	*Glen Fardig*
	-BREAK-	
	Delivering Instruction	*Robert Paugh*
	Teacher Assessment	*Steven Sorg*
	The Special Health Occupations Program	*Mary Lou Park*
	Administration Problems and Solutions	*Harry Hall*
	Questions and Answers	
12:00 noon - 1:15 p.m.	-LUNCH-	

Thursday - Afternoon Session

1:15 p.m.	Afternoon Session Begins	Moderator:	*Bob Norton*
	PBTE Module Revision		*Karen Quinn*
	Symposium: Progressive Practices in PBTE		
	School/University Cooperation		*Jerry Fuller*
	Diagnostic Assessment		*Tom Walker*
	Cornell's Consortium Approach to CBTE		*Kate Penrod*
	Preparing Part-time Instructors		*Carl Bartell*
	Staff Development at a Vo/Tech Institute		*Richard Rounds*
	Developing a Staff Learning Plan		*Donald Glendenning*
	Training Real Estate Instructors via PBTE		*Les Tyrell*
	Implementing Competency-Based Education at All Levels		*James Hoerner*
	SHARE THE WEALTH SESSION		
	Questions to Presenters	Moderator:	*Steven Sorg*
	Small Group Sessions		
	Idea Sharing		
4:30 p.m.	Adjournment		

Thursday - Evening Session

7:00 p.m.	Dinner Meeting Langford Hotel - Pavilion A	Host:	*Earl Fowler*
	The Impact of PBTE		*Robert Houston*
	National Center Impact Study		*Kay Adams*

Friday, March 21 - Morning Session

8:30 a.m.	Morning Session Begins	Moderator:	*Glen Fardig*
	Work in Progress - The National Scene		
	New Instructional Materials for Teacher Education		*Jim Hamilton*
	Materials for Administrator Training		*Bob Norton*
	-BREAK-		
	Update: Module Use in the U. S.		*Harold Parady* *Lois Harrington*
	The Competency-Based Approach to Post-secondary Staff Development		*Jim Pollard*
	Three Special Interest Sessions		*Jim Hamilton* *Bob Norton* *Jim Pollard*
	Summary Session		*Glen Fardig*
12:00 noon - 1:15 p.m.	-LUNCH-		

Friday - Afternoon Session

1:15 p.m.	Afternoon Session Begins	Moderator:	*Harry Hall*
	Looking to the Future: Implications for Teacher Education		
	The Teacher Education Center Movement		*Rex Toothman*
	The Challenge of Competency-Based Vocational Instruction		*Darrell Heitzman*
	-BREAK-		
	Reaction Panel:		
	The Future of Vocational Teacher Education		*Hamilton/Norton* *Fardig/Hall*
	Small Group Session - Plans for the Future		
	Group Reports on Plans for the Future		
4:30 p.m.	Adjournment		